M80678527.ST25
SEQUENCE LISTING

<110> Agriculture Victoria Services Pty Ltd
       AgResearch Limited

<120> Manipulation of organic acid biosynthesis and secretion

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<150> 2003901796
<151> 2003-04-14

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<151> 2004-03-10

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<170> PatentIn version 3.2

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    Lys Asn Tyr Asp Pro Arg Ala Lys Val Ile Arg Lys Leu Ala Glu Glu
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    Val Phe Thr Ile Val Gly Arg Asp Pro Leu Ile Glu Val Ala Val Ala
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    Leu Glu Lys Ala Ala Leu Ser Asp Glu Tyr Phe Ile Lys Arg Lys Leu
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    Phe Pro Thr Glu Phe Phe Pro Val Leu Phe Ala Val Pro Arg Met Ala
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65   70   75   80

Asn Phe Ser His Met Leu Gly Phe Asp Asp Pro Lys Met Leu Glu Leu
                 85   90   95

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             100   105   110

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         115   120   125

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             165   170   175

Thr Leu Lys Ser Gly Lys Val Val Pro Gly Tyr Gly His Gly Val Leu
         180   185   190

Arg Asn Thr Asp Pro Arg Tyr Ser Cys Gln Arg Glu Phe Ala Leu Lys
         195   200   205

Tyr Leu Pro Glu Asp Pro Leu Phe Gln Leu Val Ser Lys Leu Tyr Glu
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Val Val Pro Pro Ile Leu Thr Glu Leu Gly Lys Val Lys Asn Pro Trp
225   230   235   240

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Val Glu Ala Arg Tyr Tyr Thr Val Leu Phe Gly Val Ser Arg Ser Met
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Gly Ile Gly Ser Gln Leu Ile Trp Asp Arg Ala Leu Gly Leu Pro Leu
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ctacatatga agatagctta aatttgattg ctcggcttcc acaagtggct tcatatgttt     180

accggagaat tttcaaggac gggaaaacta ttgcagctga taatacactg gactacgcag     240

ctaattttc acacatgctt ggttttgatg accccaaaat gctggagttg atgcgcctat     300

acataacaat tcacactgat cacgaaggag ggaatgttag tgctcatgct gggcatctgg     360

ttggaagtgc tctgtcagat ccttatcttt cttttgcagc ggcactgaac ggtttagctg     420

gaccactgca cggcttggct aatcaggaag tgttgttatg gatcaaatct gtgatggaag     480

aaaccgggag taacattaca actgatcagc ttaaagaata tgtttggaag acactgaaga     540

gtggaaaggt tgttcctggc tatggtcatg gagttctacg taatacagat ccacgatact     600

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ccaagttgta tgaagttgtg cctcctatcc tcactgagtt aggcaaggta aaaaacccat    720

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gnactacact gncttgntcg gn                                             802
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acgtaataca gatccacgat actcgtgcca aagggagttt gcactgaagt atttacccga   180

agacccactt ttccaactgg tctccaagtt gtacgaagtt gtgcctccta tcctcaccga   240

gttaggcaag gtaaaaaacc catgccctaa tgttgatgct cacagtggag ttttgctcaa   300

ccacttcgga ttagttgaag cacggtacta cactgtcttg ttcggcgtct caaggagcat   360

gggaattgga tctcagccca tttgggaccg tgccctcggc ctgccacttg aaagaccgaa   420

gagtgtcacc atggagtggc tggaaaacca ctgcaagaag gctgcggcct gaagctacac   480

caatgcttcg ttttacaaat caggccgtct ttgatgttaa taatgactga gcataagtta   540

ggcatggtta gccttgtttt accatcttcg ttttcctggc caataactgg agcaagaggc   600

ttacagacgg tagaattttg taaccaccgn tacttgaaca ccgaatcant taaatgtcat   660

ttggcataaa gagattagga catgacacat aagttttatg tgncgntcgg              710
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M80678527.ST25

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ctggtctcca agttgtacga agttgtgcct cctatcctca ccgagttagg caaggtaaaa     180
aacccatggc ctaatgttga tgctcacagt ggagttttgc tcaaccactt cggattagtt     240
gaagcacggt actacactgt cttgttcggc gtctcaagga gcatgggaat tggatctcag     300
ctcatttggg accgtgccct cggcctgcca cttgaaagac gaagagtgt caccatggag     360
tggctggaaa accactgcaa gaaggctgcg gcctgaagct acaccaatgc ttngtttttac     420
aaatcangcc gtctttgatg ttaataatga ctgagcataa gttaggcatg ggtagccttg     480
ttttaccatn ttcgttttcc tggccaataa ctggagcaag aggctcacag acggtagaat     540
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ggacatgaca cataagtttt atgtgtcgct cgg                                 633


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aatgcttcgt tttacaaatc aggccgtctt tgatgttaat aatgactgag cataagttag     180

gcatggttag ccttgtttta ccatcttcgt tttcctggcc ataactgga caagaggct       240

cacagacggt agaattttgt aaccaccgtt acttgaacac cgaatcagtt aaatgtcatt     300

tggcataaag agattaggac atgacacata agttttatgt gtcgctcga                 349


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cttcttattt ccaccccaac cgcccaacat gtgtcctccc accgaanaaa cacctgctac     120

caacggccat agcaacggca ccaacggcgc caatggctcc aaggaaggct tcacaggcgt     180

cacgaccaga cagaaccctc accctacaca caagagccca tatgcacctg ttggcgactt     240
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M80678527.ST25

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cgccaacgcc tacttcgacc ttgaggctaa aatcaagatc gccagagctc tcgacaactt    360

tggtgttgac tacattgaag ttaccagccc tgctgcctct gagcagtcaa gaagggactg    420

cgaagccctc tgcaagctcg gattgaaagc caagatcctt acccacgtac gatgccacat    480

ggacgatgcc agaatcgctg tcgagactgg tgttgacggc ctcgatgtcg tcattggaac    540

ctctgcgtac ctccgcgagc acagccatgg caaggacatg acatacatca aaaacacagc    600

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Asn Pro Pro Thr Phe Leu Phe Pro Pro Gln Pro Pro Asn Met Cys Pro
            20              25              30


Pro Thr Glu Xaa Thr Pro Ala Thr Asn Gly His Ser Asn Gly Thr Asn
        35              40              45


Gly Ala Asn Gly Ser Lys Glu Gly Phe Thr Gly Val Thr Thr Arg Gln
    50              55              60


Asn Pro His Pro Thr His Lys Ser Pro Tyr Ala Pro Val Gly Asp Phe
65              70              75              80
```

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Leu Ser Asn Val Gly Arg Phe Lys Ile Ile Glu Ser Thr Leu Arg Glu
                    85   90   95

Gly Glu Gln Phe Ala Asn Ala Tyr Phe Asp Leu Glu Ala Lys Ile Lys
              100   105   110

Ile Ala Arg Ala Leu Asp Asn Phe Gly Val Asp Tyr Ile Glu Val Thr
          115   120   125

Ser Pro Ala Ala Ser Glu Gln Ser Arg Arg Asp Cys Glu Ala Leu Cys
      130   135   140

Lys Leu Gly Leu Lys Ala Lys Ile Leu Thr His Val Arg Cys His Met
145   150   155   160

Asp Asp Ala Arg Ile Ala Val Glu Thr Gly Val Asp Gly Leu Asp Val
              165   170   175

Val Ile Gly Thr Ser Ala Tyr Leu Arg Glu His Ser His Gly Lys Asp
              180   185   190

Met Thr Tyr Ile Lys Asn Thr Ala Leu Glu Val Ile Glu Phe Val Lys
          195   200   205

Ser Lys Gly
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agtcgttccc ggttacggac acgccgttct ccgcaagacc gacccccgct acgtctccca      180

gcgcgagttc gcccagaagc accttcccga cgacccaatg ttcaagctcg tcagtcaggt      240

ctacaagatc gcccctggtg ttctcaccga gcacggcaag accaagaacc cctaccccaa      300

cgtcgacgcc cactccggtg tcctcctcca gtactacggc ctcactgagc agaactacta      360

caccgttctc ttcggtgtat cccgtgcgct cggtgtcctt ccccagctta tcattgaccg      420

tgccgtcggt gcccccattg agaggcccaa gtctttcagc actgaggctt acgccaagtt      480

ggttggtgct aagttgtaag cgcgttactg caacgtgctc tacagccagg agaatgtgga      540

ggaatttgtt taacattcag agataccttg tcctgtgtag aattgcaatg taaggatagg      600

gaatgggagc gttacggcgc tacatcacta catttn                                636


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<213> Lolium perenne
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M80678527.ST25

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Xaa Ala Ile Gly Asn Asp Leu Ser Asp Gln Ala Ile Lys Asp Tyr Leu
            20   25   30

Trp Ser Thr Leu Lys Ala Gly Gln Val Val Pro Gly Tyr Gly His Ala
        35   40   45

Val Leu Arg Lys Thr Asp Pro Arg Tyr Val Ser Gln Arg Glu Phe Ala
    50   55   60

Gln Lys His Leu Pro Asp Asp Pro Met Phe Lys Leu Val Ser Gln Val
65   70   75   80

Tyr Lys Ile Ala Pro Gly Val Leu Thr Glu His Gly Lys Thr Lys Asn
                85   90   95

Pro Tyr Pro Asn Val Asp Ala His Ser Gly Val Leu Leu Gln Tyr Tyr
            100   105   110

Gly Leu Thr Glu Gln Asn Tyr Tyr Thr Val Leu Phe Gly Val Ser Arg
        115   120   125

Ala Leu Gly Val Leu Pro Gln Leu Ile Ile Asp Arg Ala Val Gly Ala
    130   135   140

Pro Ile Glu Arg Pro Lys Ser Phe Ser Thr Glu Ala Tyr Ala Lys Leu
145   150   155   160

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val Gly Ala Lys Leu
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tgttgaggca aaggctggaa agggatctgc aaccttgtcc atggcgtatg ctggcgcagt       180

ttttggtgat gcatgcttga agggtctgaa cggagttcct gacattgttg aatgctccta       240

cgtgcaatca actatcacag aactgccatt ctttgcctcc aaggtgaggc tcgggaagaa       300

tggagtcgag gaagtgcttg gtttgggtga gctgtcggcc tttgagaagg aaggtttgga       360

aagtctcaag ggtgagctca agtcttcaat tgacaagggc atcgcgttcg ccaatgcgag       420

ttaattaatt ttgcagatta tagcaaacca ggtctagtta aggggtctgt ttttgacttt       480

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atccggcggc gtaatgccac agaacattac ttgtacaaga gggaactagt tcgtgtcaag       600

ttttgaactg gtacattaaa cgaacaattg ctgatgcact ttgagaaaaa aaaattgggg       660

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<210>  22
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Ser Thr Asn Ala Leu Ser Ser Glu Asp Ile Lys Ala Leu Thr Lys Arg
             20                  25                  30


Thr Gln Glu Gly Gly Thr Glu Val Val Glu Ala Lys Ala Gly Lys Gly
         35                  40                  45


Ser Ala Thr Leu Ser Met Ala Tyr Ala Gly Ala Val Phe Gly Asp Ala
     50                  55                  60


Cys Leu Lys Gly Leu Asn Gly Val Pro Asp Ile Val Glu Cys Ser Tyr
65                  70                  75                  80
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Val Gln Ser Thr Ile Thr Glu Leu Pro Phe Phe Ala Ser Lys Val Arg
              85                  90                  95
```

```
Leu Gly Lys Asn Gly Val Glu Glu Val Leu Gly Leu Gly Glu Leu Ser
              100                 105                 110
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Ala Phe Glu Lys Glu Gly Leu Glu Ser Leu Lys Gly Glu Leu Lys Ser
              115                 120                 125
```

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Ser Ile Asp Lys Gly Ile Ala Phe Ala Asn Ala Ser
    130                 135             .   .   140
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tgttgaggca aaggctggaa agggatctgc aaccttgtcc atggcgtatg ctggcgcagt   180
ttttggtgat gcatgcttga agggtctgaa cggagttcct gacattgttg aatgctccta   240
cgtgcaatca actatcacag aactgccatt ctttgcctcc aaggtgaggc tcgggaagaa   300
tggagtcgag gaagtgcttg gtttgggtga gctgtcggcc tttgagaagg aaggtttgga   360
aagtctcaag ggtgagctca gtcttcaat tgacaagggc atcgcgttcg ccaatgcgag   420
ttaattaatt ttgcagatta tagcaaacca ggtctagtta aggggtctgt tgttttgtt    480
cagtgctttt tctgcccatc acgtgggcat ggaagatttg agcttcacaa taaaaatccg   540
gcggcgtaat gccacagaac attacttgta caagagggaa ctagttcgtg tcaagttttg   600
aactggtaca ttaaacgaac aattgctgat gcactttgag aaaaaaaaan              650
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gttgaggcaa aggctggaaa gggatctgca accttgtcca tggcgtatgc tggcgcagtt   180
tttggtgatg catgcttgaa gggtctgaac ggagttcctg acattgttga atgctcctac   240
gtgcaatcaa ctatcacaga actgccattc tttgcctcca aggtgaggct cgggaagaat   300
ggagtcgagg aagtgcttgg tttgggtgag ctgtcggcct ttgagaagga aggtttggaa   360
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agtctcaagg gtgagctcaa gtcttcaatt gacaagggca tcgcgttcgc caatgcgagt      420

taattaattt tgcagattat agcaaaccag gtctagttaa ggggtctgtt gtttttgttc      480

agtgcttttt ctgcccatca cgtgggcatg gaagatttga gcttcacaat aaaaatccgg      540

cggcgtaatg ccacagaaca ttacttgtac aagagggaac tagttcgtgt caagttttga      600

actggtacat taaacgaaca attgctgatg cactttgaga aaaaaaaaa                   649
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gttgaggcaa aggctggaaa gggatctgca accttgtcca tggcgtatgc tggcgcagtt      180

tttggtgatg catgcttgaa gggtctgaac ggagttcctg acattgttga atgctcctac      240

gtgcaatcaa ctatcacaga actgccattc tttgcctcca aggtgaggct cgggaagaat      300

ggagtcgagg aagtgcttgg tttgggtgag ctgtcggcct ttgagaagga aggtttggaa      360

agtctcaagg gtgagctcaa gtcttcaatt gacaagggca tcgcgttcgc caatgcgagt      420

taattaattt tgcagattat agcaaaccag gtctagttaa ggggtctgtt gtttttgttc      480

agtgcttttt ctgcccatca cgtgggcatg gaagatttga gcttcacaat aaaaatccgg      540

cggcgtaatg ccacagaaca ttacttgtac aagagggaac tagttcgtgt caagttttga      600

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M80678527.ST25

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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gaggcaaagg ctggaaaggg atctgcaacc ttgtccatgg cgtatgctgg cgcagttttt       180

ggtgatgcat gcttgaaggg tctgaacgga gttcctgaca ttgttgaatg ctcctacgtg       240

caatcaacta tcacagaact gccattcttt gcctccaagg tgaggctcgg gaagaatgga       300

gtcgaggaag tgcttggttt gggtgagctg tcggcctttg agaaggaagg tttggaaagt       360

ctcaagggtg agctcaagtc ttcaattgac aagggcatcg cgttcgccaa tgcgagttaa       420

ttaattttgc agattatagc aaaccaggtc tagttaaggg gtctgttgnt tttgntcann       480

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attgttgaat gctcctatgt gcaatcaact atcacagaac tgccattctt tgcctccaag       180

gtgaggctcg ggaagaatgg agtcgaggaa gtgcttggtt tgggtgagct gtcggccttt       240

ganaaggaag gtttggaaag tctcaagggt gagctcaagt cttcaattga caagggcatc       300

gcgttcgcca atgcgagttg attaaatttg cagattatag caatccaggt ctagttgagg       360

ggtctgtttt tgactttttg ttcagngctt tttctgccca tcacgtgggc atggaagatt       420

tgagcttcac aataaaaatc cggcggcgta atgccacana acattacttg gacaagaggg       480

aactagttcg ggtnaagttt tgaactggna cattaaacaa ccaattgttg tgcccctttg       540

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gcgttcgcca atgcgagttg attaaatttg cagattatag caatccaggt ctagttgagg      180

ggtctgtttt tgactttttg ttcagtgctt tttctgccca tcacgtgggc atggaagatt      240

tgagcttcac aataaaaatc cggcggcgta atgccacaga acattacttg tacaagaggg      300

aactagttcg tgtcaagttt tgaactggta cattaaacga acaattgttg atgcactttg      360

tgaaccgtcc tttggtgttg attccattgt cttcaagtta acgaanaana aaa            413


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agttgattaa atttgcagat tatagcaatc caggtctagt tgaggggtct gtttttgact      180

ttttgttcag tgctttttct gcccatcacg tgggcatgga agatttgagc ttcacaataa      240

aaatccggcg gcgtaatgcc acagaacatt acttgtacaa gagggaacta gttcgtgtca      300

agttttgaac tggtacatta aacgaacaat tgttgaaaaa aaaaa                      345
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tggtggccat gctggtgtta ctatcctgcc acagttctca caggctactc ctgcaagtaa     180

tgcattgtcc catgaggacc ttaaggccct caccaagagg acacaagatg gtgggacgga     240

agttgttgaa gcaaaggctg gaaagggctc agcaacattg tcaatggcat atgctggtgc     300

agtatttgga gatgcatgct tgaaggggct caatggagtt cctgacattg tagagtgctc     360

ctttgtgcaa tcaaccgtaa cagagctgcc attctttgcc tccaaggtaa ggctcggcaa     420

gaacggagtg gaggaagtga ttgggctggg cgagctgtct gccttcgaga aggagggtct     480

ggagagcctc aagggcgagc tgntgncctc catcgagaag ggtatcaagt tcgcgcagga     540

gagctagtca acctgctcag attctaacac tccgcacatg aactcggtgg gatctgatga     600

atttttggta cgactccttt cactgccccc ttctcctggg gacattgagg cgtcgngctc     660

cacaataaaa tggcgtgnct tgttgccata ctgaactgaa cttgtaatac cagaaagagt     720
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Thr Gly Val Asn Val Pro Val Val Gly Gly His Ala Gly Val Thr Ile
                35   40   45

Leu Pro Gln Phe Ser Gln Ala Thr Pro Ala Ser Asn Ala Leu Ser His
    50   55   60

Glu Asp Leu Lys Ala Leu Thr Lys Arg Thr Gln Asp Gly Gly Thr Glu
65   70   75   80

Val Val Glu Ala Lys Ala Gly Lys Gly Ser Ala Thr Leu Ser Met Ala
                85   90   95

Tyr Ala Gly Ala Val Phe Gly Asp Ala Cys Leu Lys Gly Leu Asn Gly
                100   105   110

Val Pro Asp Ile Val Glu Cys Ser Phe Val Gln Ser Thr Val Thr Glu
                115   120   125

Leu Pro Phe Phe Ala Ser Lys Val Arg Leu Gly Lys Asn Gly Val Glu
    130   135   140

Glu Val Ile Gly Leu Gly Glu Leu Ser Ala Phe Glu Lys Glu Gly Leu
145   150   155   160

M80678527.ST25
Glu Ser Leu Lys Gly Glu Leu Xaa Xaa Ser Ile Glu Lys Gly Ile Lys
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Phe Ala Gln Glu Ser
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ggtggccatg ctggtgttac tatcctgcca ctgttctcac aggctactcc tgcaagtaat     180

gcattgtccc atgaggatct taaggccctc accaagagga cacaagatgg tgggacggaa     240

gttgttgaag caaaggctgg aaagggctca gcaacattgt caatggcata tgctggtgca     300

gtatttggag atgcatgctt gaaggggctc aatggagttc ctgacattgt agagtgctcc     360

tttgtgcaat caactgtaac agagctgcca ttctttgcct ccaaggtaag gctcggcaag     420

aacggagtgg aggaagtgat tgggctgggc gagctgtctg ccttcgagaa ggagggtctg     480

gagagcctca agggcgagct gntgncctcc atcgagaagg gtatcaagtt cgcgcaggag     540

agctagtcaa cctgctcaga ttctgacact ccgtacatga actcggtggg atctgatgaa     600

tttttggtac gactcctttc tctgcccctt tttcgtgggg acattgaggc gttgngcttc     660

acattaaaat ggcgtgnntt gttgcatact ganctgacct tntattcn                  708
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ttactatcct gccacagttc tcacaggcta ctcctgcaag taatgcattg tcccatgagg     180

accttaaggc cctcaccaag aggacacaag atggtgggac ggaagttgtt gaagcaaagg     240

ctggaaaggg ctcagcaaca ttgtcgatgg catatgctgg tgcagttttt ggagatgcat     300

gcttgaaggg gctcaatgga gttcctgaca ttgtagagtg ctcctttgtg caatcaaccg     360

taacagagct gccattcttt gcctccaagg taaggctcgg caagaacgga gtggaggaag     420

tgattgggct gggcgagctg tctgccttcg agaaggaggg tctggagagc ctcaagggcg     480

agctgttgtc ctccattgag aagggtatca agttcgctca ggagagctag tcaacctgct     540

cagattctaa cactccgcac atgaactcgg tgggatctga tgaatttttg gttcgactcc     600

tttcactgcc cccttctcct ggggacattg aggcgtcgtg ctccacaata aaatggcgtg     660

tcttgttgcc atactgaact gaacttgtaa taccagaaag agtgaaaccc tgtgccttat     720

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gttaatcctc cctgctcatt caccatgagg aaattagtat ctcaccttca cagcatacag   180

aatggtggga cagaagtngt cgaggcgaaa gctggagcag gatcggnnac tntttctatg   240

gcgnatgcgg cagctaaatt tgcagatgct tgctngagag gattgcatgg tgatgctggg   300

atagnggant gctcttatgt ggattctcag gtgacgganc tntctttntt tgcatccaaa   360

gttcgccttg gttgttctgg cgtcnaggag atcttgccac ttggtccact caacgagtn   419

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Asp Pro Arg Asp Val Asn Val Pro Xaa Xaa Gly Gly His Ala Gly Val
            20   25   30

Xaa Ile Leu Pro Leu Leu Ser Gln Val Asn Pro Pro Cys Ser Phe Thr
        35   40   45

Met Arg Lys Leu Val Ser His Leu His Ser Ile Gln Asn Gly Gly Thr
    50   55   60

Glu Xaa Val Glu Ala Lys Ala Gly Ala Gly Ser Xaa Thr Xaa Ser Met
65   70   75   80

Ala Xaa Ala Ala Ala Lys Phe Ala Asp Ala Cys Xaa Arg Gly Leu His
        85   90   95

Gly Asp Ala Gly Ile Xaa Xaa Cys Ser Tyr Val Asp Ser Gln Val Thr
        100   105   110

Xaa Xaa Ser Xaa Phe Ala Ser Lys Val Arg Leu Gly Cys Ser Gly Val
    115   120   125

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cgatccagat cccacacacc gccgcagcca gcaacgatga ggccgtcggc gatgagatcc     120
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gtggccatcc tcggcgcggc cggcgggatc gggcagccgc tggcgctcct catgaagctg   240

aacccgctcg tctcctccct ctccctctac gacatcgccg ccacccccgg cgtcgccgcc   300

gacgtctccc acatcaactc cccggccctg gtgaaggggt tcatgggcga cgatcagctc   360

gcggaggcgt tggagggggc cgacctcgtc atcatcccgg ccggcgttcc gaggaagccc   420

ggcatgacca gggacgatct cttcaacatc aacgccggca tcgttaagaa cctctgcacc   480

gccatcgcca agtactgccc caacgctctt atcaacatga tcagcaaccc tgtgaactca   540

actgttccaa ttgctgctga agttttcaag aaggctggaa cctatgatga aagaagttg   600

tttggtgtga ccactcttga tgttgttcgt gccaggactt tctatgctgg gaaggctaat   660

gtacctgtta ctggtgtgaa cgttcctgtt gttggtggtc atgctggtat caccattctg   720

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Phe Arg Leu His Arg Ser Arg Ser His Thr Pro Pro Gln Pro Ala Thr
                20                  25                  30

Met Arg Pro Ser Ala Met Arg Ser Ala Ala Gln Leu Leu Arg Arg Arg
            35                  40                  45

Ser Tyr Ser Ser Ala Ser Gly Gln Pro Glu Arg Lys Val Ala Ile Leu
50                  55                  60

Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Met Lys Leu
65                  70                  75                  80

Asn Pro Leu Val Ser Ser Leu Ser Leu Tyr Asp Ile Ala Ala Thr Pro
                85                  90                  95

Gly Val Ala Ala Asp Val Ser His Ile Asn Ser Pro Ala Leu Val Lys
                100                 105                 110
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Gly Phe Met Gly Asp Asp Gln Leu Ala Glu Ala Leu Glu Gly Ala Asp
        115   120   125

Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg
    130   135   140

Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys Asn Leu Cys Thr
145   150   155   160

Ala Ile Ala Lys Tyr Cys Pro Asn Ala Leu Ile Asn Met Ile Ser Asn
            165   170   175

Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe Lys Lys Ala
            180   185   190

Gly Thr Tyr Asp Glu Lys Lys Leu Phe Gly Val Thr Thr Leu Asp Val
        195   200   205

Val Arg Ala Arg Thr Phe Tyr Ala Gly Lys Ala Asn Val Pro Val Thr
    210   215   220

Gly Val Asn Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu
225   230   235   240

Pro Leu Phe Ser Gln Ala Thr Pro Ser Thr Asn Ala Leu Ser Ser Glu
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Asp Xaa

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ttgaccccag agatgtcaat gttcctgttg ttggcgggca tgccggagtt acgatattac     180

cactcctttc gcaggttagt cctccctgct cgttcacccc tgaggaaatt agttatctca     240

cctcacgcat acagaatggt gggacagaag ttgtggaggc gaaagcagga gcaggatcgg     300

caactctttc tatggcgtat gcggcagcta aatttgcaga tgcttgcttg agaggattgc     360

atggtgatgc tgggatagtg gagtgctctt atgtggattc tcaggtgacc ggaactgcct     420

tctttgcatc caaagttcgc ctaggtcgtt ctggcgtcga ggagatcttg caacttgggt     480

ccactgaacc aggttttgaa aganctggac tggaanaagg cgaaanaang agctatcccg     540

agagccttcc agaaaggntg tgtcatttcg tncaacaaag tgagttacat gccatcatct     600

ttgttggatg tgcttcccca aagttccaac acaccgtcgn aattggcata tanatattgc     660

tggtttgggg ccttttgcnt tnatgcaaac aggctacctt ntgggtgggg ggggtccgtt     720

ntgaaaaact cttaacattt tttttacgg ttggnaacaa aatntntgaa aagcctgaga     780

antatatgat aantgaanaa agtttnnaaa aaaaan                              816
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Lys Arg Leu Leu Gly Val Thr Thr Leu Asp Val Val Arg Ala Asn Thr
            20   25   30

Phe Val Gly Glu Val Leu Gly Leu Asp Pro Arg Asp Val Asn Val Pro
        35   40   45

Val Val Gly Gly His Ala Gly Val Thr Ile Leu Pro Leu Leu Ser Gln
    50   55   60

Val Ser Pro Pro Cys Ser Phe Thr Pro Glu Glu Ile Ser Tyr Leu Thr
65   70   75   80

Ser Arg Ile Gln Asn Gly Gly Thr Glu Val Val Glu Ala Lys Ala Gly
                85   90   95

Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala Ala Lys Phe Ala
            100   105   110

Asp Ala Cys Leu Arg Gly Leu His Gly Asp Ala Gly Ile Val Glu Cys
        115   120   125

Ser Tyr Val Asp Ser Gln Val Thr Gly Thr Ala Phe Phe Ala Ser Lys
    130   135   140

Val Arg Leu Gly Arg Ser Gly Val Glu Glu Ile Leu Gln Leu Gly Ser
145   150   155   160

Thr Glu Pro Gly Phe Glu Arg Xaa Gly Leu Glu Xaa Gly Glu Xaa Xaa
                165   170   175

Ser Tyr Pro Glu Ser Leu Pro Glu Arg Xaa Cys His Phe Xaa Gln Gln
            180   185   190

Ser Glu Leu His Ala Ile Ile Phe Val Gly Cys Ala Ser Pro Lys Phe
        195   200   205

Gln His Thr Val Xaa Ile Gly Ile Xaa Ile Leu Leu Val Trp Gly Leu
    210   215   220

Leu Xaa Xaa Cys Lys Gln Ala Thr Xaa Trp Val Gly Gly Val Arg Xaa
225   230   235   240

Glu Lys Leu Leu Thr Phe Phe Phe Thr Val Xaa Asn Lys Xaa Xaa Glu
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Lys Pro Glu Xaa Tyr Met Ile Xaa Glu Xaa Ser Xaa Xaa Lys Lys

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attgcggcag aagntttcaa gagggctgga acttactgcc ccaaacgtct ccttggagtg   180

acaactcttg atgtagcgag ggctaacacc tttgtggctg aagtgcttgg agntgatcct   240

agagaagnca gtgttccggn tgttggcggg catgcaggga tcactatatt gcccctcctg   300

ncccaggtca gcccccgtg ctcattcact ccagatgaaa tcagctattt gactaaccgc   360

atacagaatg gcggtaccga agttgttgag gcaaaggctg gagcaggctc tgcaactttg   420

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gctggcattg tggaatgtnc atacgttgca tctgaggtga cagagctgcc gttctttgca   540

acaaaagtga ggttaggtcg tggcggagct gaggagatcc tccctcttgg gccactgaat   600

gactttgaga gagctggcct ggagaaggcg aanaaggagc tcagcgagag catccagaag   660

ggtgtggcgt tcatgaacaa gtgagatcat atgaatggat ggatacccg caacctatac   720

atagatgatg caaagactaa agaaagagtg tgatatagtg ctcctatata cctgtaaaat   780

ctctcctgcc tgtaagaa   798

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Pro Asn Ala Ile Val Asn Leu Ile Ser Asn Pro Val Asn Ser Thr Val
            20   25   30

Pro Ile Ala Ala Glu Xaa Phe Lys Arg Ala Gly Thr Tyr Cys Pro Lys

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M80678527.ST25
         35   40   45

Arg Leu Leu Gly Val Thr Thr Leu Asp Val Ala Arg Ala Asn Thr Phe
    50   55   60

Val Ala Glu Val Leu Gly Xaa Asp Pro Arg Glu Xaa Ser Val Pro Xaa
65   70   75   80

Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro Leu Leu Xaa Gln Val
                85   90   95

Ser Pro Pro Cys Ser Phe Thr Pro Asp Glu Ile Ser Tyr Leu Thr Asn
            100   105   110

Arg Ile Gln Asn Gly Gly Thr Glu Val Val Glu Ala Lys Ala Gly Ala
        115   120   125

Gly Ser Ala Thr Leu Ser Met Ala Phe Ala Ala Ala Lys Phe Ala Asp
    130   135   140

Ala Cys Leu Arg Gly Met Arg Gly Asp Ala Gly Ile Val Glu Cys Xaa
145   150   155   160

Tyr Val Ala Ser Glu Val Thr Glu Leu Pro Phe Phe Ala Thr Lys Val
            165   170   175

Arg Leu Gly Arg Gly Gly Ala Glu Glu Ile Leu Pro Leu Gly Pro Leu
        180   185   190

Asn Asp Phe Glu Arg Ala Gly Leu Glu Lys Ala Xaa Lys Glu Leu Ser
        195   200   205

Glu Ser Ile Gln Lys Gly Val Ala Phe Met Asn Lys
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attgcggcan aagntttcaa gagggctgga acttactgcc ccaaacgtct ccttggagtg   180

acaactcttg atgtagcgag ggctaacacc tttgtggctg aagtgcttgn agntgatcct   240

agagaagnca gtgttccggn tgttggcggg catgcnggga tcactatatt gcccctcctg   300

ncccaggtca gccccccgtg ctcattcact ccagatgaaa tcagctattt gactaaccgc   360

atacagaatg gcggtaccga agttgttgag gcaaaggctg gagcaggctc tgcaactttg   420

tcaatggctt ttgctgctgc aaaattcgcc gatgcatgct tgcgtggaat gcgtggtgat   480

gctggcattg tggaatgttc atacgttgca tctgaggtga cagagctgcc gttctttgca   540

acaaaagtga ggttaggtcg tggcggagct gaggagatcc tccctcttgg gccactgaat   600

gactttgaga gagctggcct ggagaaggcg aanaaggagc tcagcgagag catccagaag   660

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tgcggcagaa gttttcaaga gggctggaac ttactgcccc aaacgtctcc ttggagtgac      180

aactcttgat gtagcgaggg ctaacacctt tgtggctgaa gtgcttggag ttgatcctag      240

agaagtcagt gttccggttg ttggcgggca tgcagggatc actatattgc ccctcctgtc      300

ccaggtcagc cccccgtgct cattcactcc agatgaaatc agctatttga ctaaccgcat      360

acagaatggc ggtaccgaag ttgttgaggc aaaggctgga gcaggctctg caactttgtc      420

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tctctcttct actcaagacg agccccctca tcgatgagct tgccctctac gatgttgtca      180

acactcccgg tgttgccgct gatctttccc acatctcatc ccgcgctcaa atcgccggct      240
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acctccccaa ggatgatggc gcaaaggctg cattcaaaga tgccgacatt atcgtcatcc    300

ccgccggcat tcctcgcaag cctggcatga cccgtgatga cctcttcaac atcaacgccg    360

gaattgtcaa gggtctgatt gaggttgccg ccgaagttgc ccccaaggcc ttcattctgg    420

tcatctccaa ccctgtcaac tctaccgtcc ctatctctgc cgaggtcctc aaggccaagg    480

gcgtcttcaa ccctcagcgt cttttcggtg tcaccaccct cgacatcgtc cgtgccgaga    540

ctttcgtcgc cagcatcacc ggcgagaagc agccccagaa cttgaccgtc cccgtcattg    600

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Ala Gly Gly Ile Gly Gln Pro Leu Ser Leu Leu Leu Lys Thr Ser Pro
            35                  40                  45


Leu Ile Asp Glu Leu Ala Leu Tyr Asp Val Val Asn Thr Pro Gly Val
        50                  55                  60


Ala Ala Asp Leu Ser His Ile Ser Ser Arg Ala Gln Ile Ala Gly Tyr
65                  70                  75                  80


Leu Pro Lys Asp Asp Gly Ala Lys Ala Ala Phe Lys Asp Ala Asp Ile
                85                  90                  95


Ile Val Ile Pro Ala Gly Ile Pro Arg Lys Pro Gly Met Thr Arg Asp
                100                 105                 110


Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys Gly Leu Ile Glu Val
            115                 120                 125


Ala Ala Glu Val Ala Pro Lys Ala Phe Ile Leu Val Ile Ser Asn Pro
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  130   135   140
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Val Asn Ser Thr Val Pro Ile Ser Ala Glu Val Leu Lys Ala Lys Gly
145   150   155   160

Val Phe Asn Pro Gln Arg Leu Phe Gly Val Thr Thr Leu Asp Ile Val
                165   170   175

Arg Ala Glu Thr Phe Val Ala Ser Ile Thr Gly Glu Lys Gln Pro Gln
            180   185   190

Asn Leu Thr Val Pro Val Ile Gly Gly His Ser Gly Glu Thr Ile Val
        195   200   205

Pro Leu Phe Ser Lys Xaa Gln Pro Ser Ala Xaa Ile Pro
    210   215   220

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<212> DNA
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gcggcgaagg aaccgatgcg cgtgctcgtc accggcgccg caggacaaat tggatatgct   180

cttgttccga tgattgctag gggaattatg cttggtgcgg accagcctgt tattctgcat   240

atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga gttggttgat   300

gccgcatttc cacttctcaa gggagttgtt gcaacaactg atgttgttga ggcttgcact   360

ggtgtgaatg ttgcggttat ggttggtgga ttccccagga aggagggaat ggaaaggaag   420

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gcagccccga attgcaaggt tctggttgtt gccaatccag caaacaccaa tgctcttatc   540

ttaaaggagt ttgctccatc tattcctgag aagaacatca gttgtttgac ccgcctagac   600

cataacaggg cacttggtca gatctctgag agacttgatg tccaagttag tgatgtgaag   660

aatgttatca tctggggcaa tcactcttcc agtcagtacc ctgatgtgaa ccacgccacc   720

gtgaagactt ccagtggcga gaagcctgtt cgcgaacttg ttaaagacga tgaatggcta   780

aatgcagggt tcattgccac tgtccagcag cgtggtgctg caatcatcaa agcgaggaag   840

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ggaaccccctg agggaacatt tgtttccatg ggtgtgtatt ctgatggttc atacggtgtg   960

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ccgctctgat gttttgaata aaaggaacat tttggctcca tgaaactcat ctccactcag    1200

aacagttgca catcgcggtg cctttagctg ttttttccag tgtgtatgaa tgaggctttt    1260

gtagctctat tttcgcctga tgatttacag gacaggatat tggcaggaag attggaacaa    1320

tttgacgtct gattaaaacc aacctcttat tattcctgtg tgtatgaatg aggcttttgt    1380

agctctattt tcgcctgatg atttacaggc catgatattg gcaggaggat tggaacaatt    1440

tgacgcctga ttaaaaccaa cctcttatta ctaaaaaaaa aaaa                     1484
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                20                  25                  30


Gly Ala Asp Gln Pro Val Ile Leu His Met Leu Asp Ile Pro Pro Ala
            35                  40                  45


Ala Glu Ala Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe
        50                  55                  60


Pro Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys
65                  70                  75                  80


Thr Gly Val Asn Val Ala Val Met Val Gly Gly Phe Pro Arg Lys Glu
                85                  90                  95


Gly Met Glu Arg Lys Asp Val Met Ser Lys Asn Val Ser Ile Tyr Lys
                100                 105                 110


Ser Gln Ala Ser Ala Leu Glu Ala His Ala Ala Pro Asn Cys Lys Val
            115                 120                 125


Leu Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu
        130                 135                 140


Phe Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Cys Leu Thr Arg Leu
145                 150                 155                 160


Asp His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Asp Val Gln
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Val Ser Asp Val Lys Asn Val Ile Ile Trp Gly Asn His Ser Ser Ser
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Gln Tyr Pro Asp Val Asn His Ala Thr Val Lys Thr Ser Ser Gly Glu
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Lys Pro Val Arg Glu Leu Val Lys Asp Asp Glu Trp Leu Asn Ala Gly
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Phe Ile Ala Thr Val Gln Gln Arg Gly Ala Ala Ile Ile Lys Ala Arg
225   230   235   240

Lys Leu Ser Ser Ala Leu Ser Ala Ala Ser Ser Ala Cys Asp His Ile
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Arg Asp Trp Val Leu Gly Thr Pro Glu Gly Thr Phe Val Ser Met Gly
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Val Tyr Ser Asp Gly Ser Tyr Gly Val Pro Ala Gly Leu Ile Tyr Ser
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Phe Pro Val Thr Cys Cys Gly Gly Glu Trp Thr Ile Val Gln Gly Leu
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tgttccgatg attgctaggg gaattatgct tggtgcggac cagcctgtta ttctgcatat      240

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taacagggca cttggtcaga tctctgagag acttgatgnc caagttagtg atgtgaanaa      660

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gcggaccagc ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat     240

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cgcaggacaa attggatatg ctcttgttcc gatgattgct aggggaatta tgcttggtgc       180

ggaccagcct gttattctgc atatgctgga tattgcacca gctgctgaag ctcttaatgg       240

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tgtttgaccc gcctagacca taacagggca cttggtcaga tctctgagag acttgatgcc      600

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gcctgttatt ctgcatatgc tggatattcc accagctgct gaagctctta atggtgttaa     240

gatggagttg gttgatgccg catttccact tctcaaggga gttgttgcaa caactgatgt     300

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gggaatggaa aggaaggatg ttatgtctaa gaatgtttca atctacaaat ctcaagcatc     420

tgcccttgaa gcccatgcag ccccgaattg caaggttctg gttgttgcca atccagcaaa     480

caccaatgct cttatcttaa aggagtttgc tccatctatt cctgagaaga acatcagttg     540
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ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga     240

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ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg     360

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atgtgaacca cgccaccgtg aagacttcca gtggcgagaa gcctgttcgc gaacttgtta     720

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cctgttattc tgcatatgct ggatattcca ccagccgctg aagctcttaa tggtgttaag       240

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gcctgttatt ctgcatatgc tggatattcc accagctgct gaagctctta atggtgttaa       240

gatggagttg gttgatgccg catttccact tctcaaggga gttgttgcaa caactgatgt       300

tgttgaggct tgcactggtg tgaatgttgc ggttatggtt ggtggattcc ccaggaagga       360

gggaatggaa aggaaggatg ttatgtctaa gaatgtttca atctacaaat ctcaagcatc       420

tgcccttgaa gcccatgcag ccccgaattg caaggttctg gttgttgcca atccagcaaa       480

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tttgacccgc ctagaccata acagggcact tggtcagatc tctgagagac ttgatgtcca       600

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ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga    240

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gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg    420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca    480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt    540

tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag    600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg    660

tgaaccacgc caccgtgaag acttncagtg cgagaagcc tgttcgcgaa cttgttaaag    720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca    780

tcaaagcgag gaagctctnc a                                              801


<210>   60
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<212>   DNA
<213>   Lolium perenne

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accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca    120

aattggatat gctcttgttc cgatgattgc tagggggaatt atgcttggtg cggaccagcc    180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat    240

ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt    300

tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg    360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc    420
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M80678527.ST25

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ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac      480

caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt      540

gacccgccta gaccataaca ggc                                             563
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```
<210>  61
<211>  692
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (2)..(3)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (34)..(34)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (692)..(692)
<223>  n is a, c, g, or t

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aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc     180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga     240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg     300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg     360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg     420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca     480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt     540

tgacccgcct agaccataac agggcactcg gtcagatctc tgagagactt gatgtccaag     600

ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa taccctgatg     660

tgaaccacgc caccgtgaag acttccagtg gn                                   692
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<210>  62
<211>  764
<212>  DNA
<213>  Lolium perenne

<400>  62
gatccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag      60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac     120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc     180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga     240
```

M80678527.ST25

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tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg    300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg    360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg    420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca    480

ccaatgctct tatcttaaag gagttcgctc catctattcc tgagaagaac atcagttgtt    540

tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag    600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg    660

tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag    720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcag                     764
```

```
<210>    63
<211>    769
<212>    DNA
<213>    Lolium perenne


<220>
<221>    misc_feature
<222>    (2)..(2)
<223>    n is a, c, g, or t

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aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac    120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc    180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga    240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg    300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg    360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg    420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca    480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt    540

tgacccgcct agaccataac agggcactcg gtcagatctc tgagaggctt gatgtccaag    600

ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa taccctgatg    660

tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag    720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtgg                 769
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<210>    64
<211>    770
<212>    DNA
<213>    Lolium perenne


<220>
<221>    misc_feature
<222>    (763)..(763)
<223>    n is a, c, g, or t
```

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<400> 64
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accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca     120
aattggatat gctcttgttc cgatgattgc tagggggaatt atgcttggtg cggaccagcc     180
tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat     240
ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt     300
tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg     360
aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc     420
ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac     480
caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt     540
gacccgccta gaccataaca gggcacttgg tcagatctct gagagacttg atgtccaagt     600
tagtgatgtg aagaatgtta tcatctgggg caatcactct tccagtcagt accctgatgt     660
gaaccacgcc accgtgaaga cttccagtgg cgagaagcct gttcgcgaac ttgttaaaga     720
cgatgaatgg ctaaatgcag ggttcattgc cactgtccag cancgtggtg               770
```

<210> 65
<211> 779
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<400> 65
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aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac     120
aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc     180
ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga     240
tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcgaca actgatgttg     300
ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg     360
gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg     420
cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagtaaaca     480
ccaatgctct tatcctaaag gagtttgctc catctattcc tgagaagaac atcagttgtt     540
tgacccgcct agaccataac agggcactcg gtcagatctc tgagagactt gatgtccaag     600
ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa taccctgatg     660
tgaaccacgc caccgtgaag acttccagtg cgagaagcc tgttcgcgaa cttgttaaag     720
acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatc     779
```

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<210> 66
<211> 788
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (643)..(643)
<223> n is a, c, g, or t

<400> 66
gnnccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag   60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac   120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc   180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga   240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg   300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg   360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatccg   420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca   480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt   540

tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag   600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttncagtcag taccctgatg   660

tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag   720

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tcaaagcg   788

<210> 67
<211> 794
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (8)..(8)
<223> n is a, c, g, or t

<400> 67
gttccttntc cgttgtcgt cgcctcctcc cgaccactct ccccatcccc gaactccaga   60

accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca   120

aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc   180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat   240

ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt   300

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```
tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg    360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc    420

ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac    480

caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt    540

gacccgccta gaccataaca gggcactcgg tcagatctct gagaggcttg atgtccaagt    600

tagtgatgtg aagaatgtta tcatctgggg taatcactct tccagtcaat accctgatgt    660

gaaccacgcc accgtgaaga cttccagtgg cgagaagcct gttcgcgaac ttgttaaaga    720

cgatgaatgg ctaaatgcag ggttcattgc cactgtccag cagcgtggtg ctgcaatcat    780

caaagcgagg aagc                                                      794
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<210>  68
<211>  797
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (489)..(489)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (734)..(734)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (757)..(757)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (776)..(776)
<223>  n is a, c, g, or t

<400>  68
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aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac    120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc    180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga    240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg    300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg    360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatccg    420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca    480

ccaatgctnt tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt    540
```

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```
tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag    600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg    660

tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag    720

acgatgaatg gctnaatgca gggttcattg ccactgncca gcagcgtggt gctgcnatca    780

tcaaagcgag gaagctt                                                    797
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<210>   69
<211>   802
<212>   DNA
<213>.  Lolium perenne


<220>
<221>   misc_feature
<222>   (222)..(222)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (685)..(685)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (770)..(770)
<223>   n is a, c, g, or t

<400>   69
gatccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag    60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac    120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc    180

ctgttattct gcatatgctg gatattccac cagctgctga anctcttaat ggtgttaaga    240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg    300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg    360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg    420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca    480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt    540

tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag    600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg    660

tgaaccacgc caccgtgaag acttncagtg gcgagaagcc tgttcgcgaa cttgttaaag    720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggn gctgcatcat    780

caaagcgagg aagctcttca gt                                             802
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<210>   70
<211>   315
<212>   DNA
<213>   Lolium perenne
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M80678527.ST25

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (13)..(13)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (257)..(257)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (302)..(302)
<223>  n is a, c, g, or t

<400>  70
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accggctcca atggcggcca aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca     120

aattggatat gctcttgttc cgatgattgc tangggaatt atgcttggtg cggaccagcc     180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat     240

ggagttggtt gatgccncat ttccacttct caagggagtt gttgcaacaa ctgatgttgt     300

tnaggcttgc actgg                                                      315
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<210>  71
<211>  525
<212>  DNA
<213>  Lolium perenne
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<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (23)..(23)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (26)..(26)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
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<220>
<221> misc_feature
<222> (78)..(78)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (269)..(269)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (493)..(493)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (515)..(515)
<223> n is a, c, g, or t

<400> 71
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accggctcca atggcggnga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca   120

aattggatat gctcttgttc cgatgattgc tagggggaatt atgcttggtg cggaccagcc   180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat   240

ggagttggtt gatgccgcat ttccacttnt caagggagtt gttgcaacaa ctgatgttgt   300

tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg   . 360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc   420

ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac   480

caatgctctt atnttaaagg agtttgctcc atctnttcct gagaa   525

<210> 72
<211> 696
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (7)..(7)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (547)..(547)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (603)..(603)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (613)..(613)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (632)..(632)
<223> n is a, c, g, or t

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ccggctccaa tggcggcgaa ggaaccgatg cgcgtgctcg tcaccggcgc cgcaggacaa     120

attggatatg ctcttgttcc gatgattgct aggggaatta tgcttggtgc ggaccagcct     180

gttattctgc atatgctgga tattccacca gctgctgaag ctcttaatgg tgttaagatg     240

gagttggttg atgccgcatt tccacttctc aagggagttg ttgcaacaac tgatgttgtt     300

gaggcttgca ctggtgtgaa tgttgcggtt atggttggtg gattccccag gaaggaggga     360

atggaaagga aggatgttat gtctaagaat gtttcaatct acaaatctca agcatctgcc     420

cttgaagccc atgcagcccc gaattgcaag gttctggttg ttgccaatcc agcaaacacc     480

aatgctctta tcttaaagga gtttgctcca tctattcctg agaagaacat cagttgtttg     540

acccgcctag accataacag ggcacttggt cagatctctg agagacttga tgtccaagtt     600

agtgatgtga aaaatgttat catctggggc aatcactctt ccagtc                   646
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<210>  74
<211>  711
<212>  DNA
<213>  Lolium perenne
```

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<222>  (8)..(8)
<223>  n is a, c, g, or t
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<221>  misc_feature
<222>  (642)..(642)
<223>  n is a, c, g, or t
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<220>
<221>  misc_feature
<222>  (679)..(679)
<223>  n is a, c, g, or t
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accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca     120

aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc     180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat     240

ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt     300

tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg     360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc     420

ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac     480

caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt     540

gacccgccta gaccataaca gggcactcgg tcagatctct gagagacttg atgtccaagt     600

tagtgatgtg aagaatgtta tcatctgggg taatcactct tncagtcaat accctgatgt     660
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M80678527.ST25
gaaccacgcc accgtgaana ctttcagtgg cgagaagcct gttcgcgaac t   711

<210> 75
<211> 768
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g, or t

<400> 75
tccttntccc gttgtcgtcg cctcctcccg accactctcc ccatccccga actccagaac   60

cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa   120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg   180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg   240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg   300

aggcttgcac tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa   360

tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc   420

ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca   480

atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga   540

cccgcctaga ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta   600

gtgatgtgaa gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga   660

accacgccac cgtgaagact ccagtggcg agaagcctgt cgcgaactt gttaaagacg   720

atgaatggct aaatgcaggg ttcattgcca ctgtccagca gcgtggtg   768

<210> 76
<211> 783
<212> DNA
<213> Lolium perenne

<400> 76
tccttatccc gttgtcgtcg cctcctcccg accactctcc ccatccccga actccagaac   60

cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa   120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg   180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg   240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg   300

aggcttgcac tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa   360

tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc   420

ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca   480

atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga   540

cccgcctaga ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta   600

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gtgatgtgaa gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga    660

accacgccac cgtgaagact tccagtggcg agaagcctgt tcgcgaactt gttaaagacg    720

atgaatggct aaatgcaggg ttcattgcca ctgtccagca gcgtggtgct gcaatcatca    780

aag                                                                  783
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<210>  77
<211>  803
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (7)..(7)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (713)..(713)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (797)..(797)
<223>  n is a, c, g, or t

<400>  77
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tccttcntcc cgttgtcgtc gcctcctccc gaccactctc cccatccccg aactccagaa     60

ccggctccaa tggcggcgaa ggaaccgatg cgcgtgctcg tcaccggcgc cgcaggacaa    120

attggatatg ctcttgttcc gatgattgct aggggaatta tgcttggtgc ggaccagcct    180

gttattctgc atatgctgga tattccacca gctgctgaag ctcttaatgg tgttaagatg    240

gagttggttg atgccgcatt tccacttctc aagggagttg ttgcaacaac tgatgttgtt    300

gaggcttgca ctggtgtgaa tgttgcggtt atggttggtg gattccccag gaaggaggga    360

atggaaagga aggatgttat gtctaagaat gtttcaatct acaaatctca agcatctgcc    420

cttgaagccc atgcagcccc gaattgcaag gttctggttg ttgccaatcc agcaaacacc    480

aatgctctta tcttaaagga gtttgctcca tctattcctg agaagaacat cagttgtttg    540

acccgcctag accataacag ggcactcggt cagatctctg agaggcttga tgtccaagtt    600

agtgatgtga agaatgttat catctggggt aatcactctt ccagtcaata ccctgatgtg    660

aaccacgcca ccgtgaagac ttccagtggc gagaagcctg ttcgcgaact tgntaaagac    720

gatgaatggc taaatgcagg gttcattgcc actgtccagc agcgtggtgc tgcaatcatc    780

aaagcgagga agctctncag tgc                                            803
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<210>  78
<211>  595
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
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M80678527.ST25

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<222>   (386)..(386)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (439)..(439)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (496)..(496)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (510)..(510)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (520)..(520)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (529)..(529)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (531)..(531)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (558)..(558)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (561)..(562)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (567)..(567)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (578)..(578)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (580)..(580)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (588)..(588)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (590)..(590)
<223>   n is a, c, g, or t
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<220>
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<222> (595)..(595)
<223> n is a, c, g, or t

<400> 78
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cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa   120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg   180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg   240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg   300

aggcttgcac tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa   360

tggaaaggaa ggatgttatg tctaanaatg tttcaatcta caaatcttaa gcatctgccc   420

ttgaagccca tgcaccccna attgcaaggg tctggttgtt gccaatccag caaacaccaa   480

tgcttttatt ttaaangagt ttgctccatn tattcctgan aagaacatna nttgtttgac   540

ccgcctagac cataacangg nncttgncaa aatctttnan agacttgntn tcaan        595
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<210> 79
<211> 696
<212> DNA
<213> Lolium perenne
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<220>
<221> misc_feature
<222> (1)..(1)
<223> n is a, c, g, or t
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<220>
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<222> (11)..(11)
<223> n is a, c, g, or t
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<220>
<221> misc_feature
<222> (120)..(120)
<223> n is a, c, g, or t
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<220>
<221> misc_feature
<222> (335)..(335)
<223> n is a, c, g, or t
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<220>
<221> misc_feature
<222> (387)..(387)
<223> n is a, c, g, or t
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<220>
<221> misc_feature
<222> (482)..(482)
<223> n is a, c, g, or t
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<220>
<221> misc_feature
<222> (603)..(603)
<223> n is a, c, g, or t
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M80678527.ST25

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<220>
<221>  misc_feature
<222>  (608)..(608)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (612)..(612)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (674)..(674)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (689)..(689)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (695)..(696)
<223>  n is a, c, g, or t

<400>  79
nccttctccc nttgtcgtcg cctcctcccg aaccactctc cccatccccg aactccagaa      60

ccggctccaa tggcggcgaa ggaaccgatg cgcgtgctcg tcaccggcgc cgcaggacan     120

attggatatg ctcttgttcc gatgattgct aggggaatta tgcttggtgc ggaccagcct     180

gttattctgc atatgctgga tattccacca gctgctgaag ctcttaatgg tgttaagatg     240

gagttggttg atgccgcatt tccacttctc aagggagttg ttgcaacaac tgatgttgtt     300

gaggcttgca ctggtgtgaa tgttgcggtt atggntggtg gattccccag gaaggaggga     360

atggaaagga aggatgttat gtctaanaat gtttcaatct acaaatctca agcatctgcc     420

cttgaagccc atgcagcccc gaattgcaag gttctggttg ttgccaatcc agcaaacacc     480

antgctctta tcttaaagga gtttgctcca tctatccctg agaagaacat cagttgtttg     540

acccgcctag accataacag ggcacttggt cagatctctg agagacttga tgtccaagtt     600

agngatgnga anaatgttat catctggggc aatcactctt ccagtcagta ccctgatgtg     660

aaccacgcca ccgngaagac ttccagtgnc gagann                               696


<210>  80
<211>  779
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (77)..(77)
<223>  n is a, c, g, or t

<400>  80
accttatccc gttgtcgtcg cctcctcccg accactctcc ccatccccga actccagaac      60

cggctccaac ggcggcnaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa     120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg     180
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ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg   240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacgact gatgttgttg   300

aggcttgcac tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa   360

tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc   420

ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca   480

atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga   540

cccgcctaga ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta   600

gtgatgtgaa gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga   660

accacgccac cgtgaagact tccagtggcg agaagcctgt tcgcgaactt gttaaagacg   720

atgaatggct aaatgcaggg ttcattgcca ctgtccagca gcgtggtgct gcaatcata    779
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<210>   81
<211>   470
<212>   DNA
<213>   Lolium perenne


<220>
<221>   misc_feature
<222>   (4)..(4)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (44)..(44)
<223>   n is a, c, g, or t

<400>   81
cttnctcccg ttgtcgtcgc ctcctcccga accactctcc cctnccccga actccagaac   60

cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa   120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg   180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg   240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg   300

aggcttgcac tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa   360

tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc   420

ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca               470
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<210>   82
<211>   599
<212>   DNA
<213>   Lolium perenne


<220>
<221>   misc_feature
<222>   (3)..(3)
<223>   n is a, c, g, or t

<220>
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M80678527.ST25

<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (10)..(10)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (44)..(44)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (580)..(580)
<223> n is a, c, g, or t

<400> 82

ttnctnccgn ctgtcgtcgc ctcctcccga accactctcc cctnccccga actccaaacc   60

ggctccaatg gcggcgaagg aaccgatgcg cgtgctcgtc accggcgccg caggacaaat   120

tggatatgct cttgttccga tgattgctag gggaattatg cttggtgcgg accagcctgt   180

tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga   240

gttggttgat gccgcatttc cacttctcaa gggagttgtt gcaacaactg atgttgttga   300

ggcttgcact ggtgtgaatg ttgcggttat ggttggtgga ttccccagga aggagggaat   360

ggaaaggaag gatgttatgt ctaagaatgt ttcaatctac aaatctcaag catctgccct   420

tgaagcccat gcagccccga attgcaaggt tctggttgtt gccaatccag caaacaccaa   480

tgctcttatc ttaaaggagt ttgctccatc tattcctgag aagaacatca gttgtttgac   540

ccgcctagac cataacaggg cacttggtca gatctctgan agacttgatg tccaagtta   599

<210> 83
<211> 606
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (3)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g, or t

<220>
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<222> (12)..(12)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (43)..(44)
<223> n is a, c, g, or t

<220>

M80678527.ST25

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<221>  misc_feature
<222>  (545)..(545)
<223>  n is a, c, g, or t

<220>
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<222>  (569)..(569)
<223>  n is a, c, g, or t

<400>  83
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cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa    120
ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg    180
ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg    240
agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg    300
aggcttgcac tggtgtgaat gctgcggtta tggttggtgg attccccagg aaggagggaa    360
tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc    420
ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca    480
atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga    540
cccgnctaga ccataacagg gcactcggnc agatctctga gagacttgat gtccaagtta    600
gtgatg                                                               606


<210>  84
<211>  686
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (1)..(1)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (33)..(33)
<223>  n is a, c, g, or t

<400>  84
nttcatcccg ttgtcgtcgc ctcctcccga acnctctccc catccccgaa ctccagaacc     60
ggctccaatg gcggcgaagg aaccgatgcg cgtgctcgtc accggcgccg caggacaaat    120
tggatatgct cttgttccga tgattgctag gggaattatg ctcggtgcgg accagcctgt    180
tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga    240
gttggttgat gccgcatttc cacttctcaa gggagttgtt gcaacaactg atgttgttga    300
ggcttgcact ggtgtgaatg ttgcggttat ggttggtgga ttccccagga aggagggaat    360
ggaaaggaag gatgttatgt ctaagaatgt ttcaatctac aaatctcaag catctgccct    420
tgaagccatg cagccccgaa ttgcaaggtt ctggttgttg ccaatccagc aaacaccaat    480
gctcttatct taaaggagtt tgctccatct attcctgaga agaacatcag ttgtttgacc    540
```

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                              M80678527.ST25
cgcctagacc ataacagggc acttggtcag atctctgaga gacttgatgt ccaagttagt    600

gatgtgaaga atgttatcat ctggggcaat cactcttcca gtcagtaccc tgatgtgaac    660

cacgccaccg tgaagacttt cagtgg                                         686
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<210>    85
<211>    341
<212>    DNA
<213>    Lolium perenne


<220>
<221>    misc_feature
<222>    (9)..(9)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (17)..(17)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (22)..(22)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (98)..(98)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (150)..(150)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (175)..(175)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (276)..(276)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (279)..(279)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (297)..(297)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (305)..(305)
<223>    n is a, c, g, or t

<400>    85
ttcatcccnt tgtcgtngcc tnctcccgaa ccactctccc cttccccgaa ctccagaacc    60

ggctccaatg gcggcgaagg aaccgatgcg cgtgctcntc accggcgccg caggacaaat    120
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M80678527.ST25

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tggatatgct cttgttccga tgattgctan gggaattatg cttggtgcgg accancctgt     180

tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga     240

gttggttgat gccgcatttc cacttctcaa gggagntgnt gcaacaactg atgttgntga     300

ggctngcact ggtgtgaatg ttgcggttat ggatggtgga t                        341
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<210>   86
<211>   349
<212>   DNA
<213>   Lolium perenne


<220>
<221>   misc_feature
<222>   (245)..(245)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (265)..(265)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (278)..(278)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (294)..(294)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (300)..(300)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (312)..(312)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (326)..(328)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (331)..(331)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (333)..(334)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (340)..(340)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (345)..(345)
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<223>  n is a, c, g, or t

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ggatatgctc ttgttccgat gattgctagg ggaattatgc ttggtgcgga ccagcctgtt     180

attctgcata tgcaggatat tccaccagct gctgaagctc ttaatggtgt taagatggag     240

ttggntgatg ccgcatttcc acttntcaag ggagttgntg caacaactga tgtngttgan     300

gcttgcactg gngtgaatgt tgcggnnntg ncnngcccan gtaanatnn               349


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gctccaatgg cggcgaagga accgatgcgc gtgctcgtca ccggcgccgc aggacaaatt     120

ggatatgctc ttgttccgat gattgctagg ggaattatgc ttggtgcgga ccagcccgtt     180

attctgcata tgctggatat tccaccagct gctgaagctc ttaatggtgt taagatggag     240

ttggttgatg ccgcatttcc acttctcaag ggagttgttg caacaactga tgttgttgag     300

gcttgcactg gtgtgaatgt tgcggttatg gttggtggat tccccaggaa ggagggaatg     360

gaaaggaagg atgttatgtc taagaatgtt tcaatctaca aatctcaagc atctgccctt     420

gaagcccatg cagccccgaa ttgcaaggtt ctggttgttg ccaatccagc aaacaccaat     480

gctcttatct taaaggagnt tgctccatct attcctgaga anaacatcag ntgtttgacc     540

cgcctagacc ataacaggnc actcggncag anctctgaga gacntgatgc ccaagntngn     600

gntgn                                                                605
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<213>   Lolium perenne

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<223>   n is a, c, g, or t

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ctccaatggc ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg     120
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gatatgctct tgttccgatg attgctaggg gaattatgct tggtgcggac cagcctgtta        180

ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtgtt aagatggagt        240

tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg        300

cttgcactgg tgtgaatgtt gcggttatgg ttggtggatt ccccaggaag gagggaatgg        360

aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg        420

aagcccatgc agccccgaat tgcaaggttc tggttgttgc caatccagca aacaccaatg        480

ctcttatctt aaaggagttt gctccatcta ttcctgagaa gaacatcagt tgtttgaccc        540

gcctagacca taacagggca cttggtcaga tctctgagag acttgatgtc caagttagtg        600

atgtgaagaa tgttatcatc tgggcaaatc actcttccag tcagtaccct gatgtgaacc        660

acgccaccgt gaagacttcc agtgg                                             685
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<213>   Lolium perenne


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ggatatgctc ttgttccgat gattgctagg ggaattatgc ttggtgcgga ccagcctgtt        180

attctgcata tgctggatat tccaccagct gctgaagctc ttaatggtgt taagatggag        240

ttggttgatg ccgcatttcc acttctcaag ggagttgttg caacaactga tgttgttgag      · 300

gcttgcactg gtgtgaatgt tgcggttatg gttggtggat tccccaggaa ggagggaatg        360

gaaaggaagg atgttatgtc taagaatgtt tcaatctaca aatctcaagc atctgccctt        420

gaagcccatg cagccccgaa ttgcaaggtt ctggttgttg ccaatccagc aaacaccaat        480

gctcttatct taaaggagtt tgctccatct attcctgaga agaacatcag ttgtttgacc        540

cgcctagacc ataacagggc acttggtcag atctctgaga gacttgatgt ccaagttagt        600

gatgtgaaga atgttatcat ctggggcaat cactcttcca gtcagtaccc tgatgtgaac        660

cacgccaccg tgaagacttc cagtggcgag aagcctgttc gcgaacttgt taaagacgat        720

gaatggctaa atgcagggtt cattgccact gtccagcagc gtg                         763
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<210>   90
<211>   790
<212>   DNA
<213>   Lolium perenne


<220>
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ctccaatggc ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg     120

gatatgctct tgttccgatg attgctaggg gaattatgct tggtgcggac cagcctgtta   . 180

ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtgtt aagatggagt     240

tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg     300

cttgcactgg tgtgaatgtt gcggttatgg ttggtggatt ccccaggaag gagggaatgg     360

aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg     420

aagcccatgc agccccgaat tgcaaggttc tggttgttgc caatccagca aacaccaatg     480

ctcttatctt aaaggagttt gctccatcta ttcctgagaa gaacatcagt tgtttgaccc     540

gcctagacca taacagggca cttggtcaga tctctgagag acttgatgtc caagttagtg     600

atgtgaagaa tgttatcatc tggggcaatc actcttccag tcagtaccct gatgtgaacc     660

acgccaccgt gaagacttcc agtggcgaga agcctgttcg cgaacttgtt aaagacgatg     720

aatggctaaa tgcagggttc attgccactg tccagcagcg tggtgctgca atcatcaaag     780

cgaggaagct                                                          . 790


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<211>  690
<212>  DNA
<213>  Lolium perenne


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tccaatggcg gcgaaggaac cgatgcgcgt gctcgtcacc ggcgccgcag gacaaattgg     120

atatgctctt gttccgatga ttgctagggg aattatgctt ggtgcggacc agcctgttat     180

tctgcatatg ctggatattc caccagctgc tgaagctctt aatggtgtta agatggagtt     240

ggttgatgcc gcatttccac ttctcaaggg agttgttgca acaactgatg ttgttgaggc     300

ttgcactggt gtgaatgttg cggttatggt tggtggattc cccaggaagg agggaatgga     360

aaggaaggat gttatgtcta agaatgtttc aatctacaaa tctcaagcat ctgcccttga     420

agcccatgca gccccgaatt gcaaggttct ggttgttgcc aatccagcaa acaccaatgc     480

tcttatctta aaggagtttg ctccatctat tcctgagaag aacatcagtt gtttgacccg     540

cctagaccat aacagggcac tcggtcagat ctctgagaga cttgatgtcc aagttagtga     600

tgtgaagaat gttatcatct ggggtaatca ctcttccagt caataccctg atgtgaacca     660
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cgccaccgtg aagacttnca gtggcgagaa   690

<210> 92
<211> 700
<212> DNA
<213> Lolium perenne

<220>
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ctccaatggc ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg   120

gatatgctct tgttccgatg attgctaggg gaattatgct tggtgcggac cagcctgtta   180

ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtgtt aagatggagt   240

tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg   300

cttgcactgg tgtgaatgtt gcggttatgg ttggtggatt ccccaggaag gagggaatgg   360

aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg   420

aagcccatgc agccccgaat tgcaaggttc tggttgttgc caatccagca aacaccaatg   480

ctcttatctt aaaggagttt gctccatcta ttcctgagaa gaacatcagt tgtttgaccc   540

gcctagacca taacagggca ctcggtcaga tctctgagag acttgatgtc caagttagtg   600

atgtgaagaa tgttatcatc tggggtaatc actcttccag tcaataccct gatgtgaacc   660

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<210> 93
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<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

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<222> (571)..(571)
<223> n is a, c, g, or t

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<223>    n is a, c, g, or t

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<222>    (643)..(643)
<223>    n is a, c, g, or t

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<221>    misc_feature
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<223>    n is a, c, g, or t

<220>
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<223>    n is a, c, g, or t

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caatggcggc gaaggaaccg atgcgcgtgc tcgtcaccgg cgccgcagga caaattggat       120

atgctcttgt tccgatgatt gctaggggaa ttatgcttgg tgcggaccag cctgttattc       180

tgcatatgct ggatattcca ccagctgctg aagctcttaa tggtgttaag atggagttgg       240

ttgatgccgc atttccactt ctcaagggag ttgttgcaac aactgatgtt gttgaggctt       300

gcactggtgt gaatgttgcg gttatggttg gtggattccc caggaaggag ggaatggaaa       360

ggaaggatgt tatgtctaaa aatgtttcaa tctacaaatc tcaagcatct gcccttgaag       420

cccatgcagc cccgaattgc aaggttctgg ttgttgccaa tccagcaaac accaatgctt       480

ttatcttaaa ggagtttgct ccatctattc ctganaagaa catnanttgt ttgacccgcc       540

taaaccataa cagggcactt ggtcagatct ntganagact tgatggccaa gttagngatg       600

tgaaaaatgt tatcatntgg ggcaatnact nttccagtca gtncctgat gtgaaccacn        660

cccccggaaa nacttccag                                                     679

<210>    94
<211>    676
<212>    DNA
<213>    Lolium perenne
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<220>
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<223> n is a, c, g, or t

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tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg ttattctgca     180
tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg agttggttga     240
tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg aggcttgcac     300
tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa tggaaaggaa     360
ggatgttatg tctaagaatg tttcaatcta caaatctcaa gtatctgccc ttgaagccca     420
tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca atgctcttat     480
cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga cccgcctaga     540
ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta gtgatgtgaa     600
gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga accacgccac     660
cgtgaagact tccagn                                                     676
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<210> 95
<211> 786
<212> DNA
<213> Lolium perenne

<400> 95

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tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc ctgttattct     180
gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga tggagttggt     240
tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg ttgaggcttg     300
cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg gaatggaaag     360
gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg cccttgaagc     420
ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca ccaatgctct     480
tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttatt tgacccgcct     540
agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag ttagtgatgt     600
gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg tgaaccacgc     660
caccgtgaag acttccagtg cgagaagcc tgttcgcgaa cttgttaaag acgatgaatg     720
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gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca tcaaagcgag      780

gaagct                                                               786
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<213>  Lolium perenne
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aggggaatta tgcttggtgc ggaccagcct gttattctgc atatgctgga tattccacca      180

gctgctgaag ctcttaatgg tgttaagatg gagttggttg atgccgcatt tccacttctc      240

aagggagttg ttgcaacaac tgatgttgtt gaggcttgca ctggtgtgaa tgttgcggtt      300

atggttggtg gatcccccag gaaggaggga atggaaagga aggatgttat gtctaagaat      360

gtttcaatct acaaatctca agcatctgcc cttgaagccc atgcagcccc gaattgcaag      420

gttctggttg ttgccaatcc agcaaacacc aatgctctta tcttaaagga gtttgctcca      480

tctattcctg agaagaacat cagttgtttg acccgcctag accataacag ggcacttggt      540

cagatctctg agagacttga tgtccaagtt agtgatgtga agaatgttat catctggggc      600

aatcactctt ccagtcagta ccctgatgtg aaccacgcca ccgtgaggac ttccagtggc      660

gagaagcctg ttcgcgaact tgttaaagac gatgaatggc taaatgcagg gttcattgcc      720

actgtccagc agcgtggtgc tgcaatcatc aaagcgagga agctctccag tg             772
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<213>  Lolium perenne
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tgcggaccag cctgttattc tgcatatgct ggatattcca ccagctgctg aagctcttaa     180

tggtgttaag atggagttgg ttgatgccgc atttccactt ctcaagggag ttgttgcaac     240

aactgatgtt gttgaggctt gcactggtgt gaatgttgcg gttatggttg gtggattccc     300

caggaaggag ggaatggaaa ggaaggatgt tatgtctaag aatgtttcaa tctacaaatc     360

tcaagcatct gcccttgaag cccatgcagc cccgaattgt aaggttctgg ttgttgccaa     420

tccagcaaac accaatgctc ttatcttaaa ggagtttgct ccatctattc ctgagaagaa     480

catcagttgt ttgacccgcc tagaccataa cagggcactc ggtcagatct ctgagagact     540

tgatgtccaa gttagtgatg tgaagaatgt tatcatctgg ggtaatcact cttccagtca     600

ataccctgat gtgaaccacg ccaccgtgaa gacttccagt ggcgagaagc ctgttcgcga     660

acttgttaaa gacgat                                                     676


<210>   98
<211>   763
<212>   DNA
<213>   Lolium perenne


<220>
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atgattgcta ggggaattat gcttggtgcg gaccagcctg ttattctgca tatgctggat     120

attccaccag ctgctgaagc tcttaatggt gttaagatgg agttggttga tgccgcattt     180

ccacttctca agggagttgt tgcaacaact gatgttgttg aggcttgcac tggtgtgaat     240

gttgcggtta tggttggtgg attccccagg aaggagggaa tggaaggaa ggatgttatg     300

tctaagaatg tttcaatcta caaatctcaa gcatctgccc ttgaagccca tgcagccccg     360

aattgcaagg ttctggttgt tgccaatcca gcaaacacca atgctcttat cttaaaggag     420

tttgctccat ctattcctga gaagaacatc agttgtttga cccgcctaga ccataacagg     480

gcacttggtc agatctctga gacttgat gtccaagtta gtgatgtgaa gaatgttatc     540

atctggggca atcactcttc cagtcagtac cctgatgtga accacgccac cgtgaagact     600

tccagtggcg agaagcctgt tcgcgaactt gttaagacg atgaatggct aaatgcaggg     660

ttcattgcca ctgtccagca gcgtggtgct gcaatcatca aagcgaggaa gctctccagt     720
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gctctctctg ctgccagctc tgcttgtgac cacatccgtg att   763

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<211>  513
<212>  DNA
<213>  Lolium perenne


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gttgcaacaa ctgatgttgt tgaggcttgc actggtgtga atgttgcggt tatggttggt     180

ggattcccca ggaaggaggg agtggaaagg aaggatgtta tgtctaagaa tgtttcaatc     240

tacaaatctc aagcatctgc ccttgaagcc catgcagccc cgaattgcaa ggttctggtt     300

gttgccaatc cagcaaacac caatgctctt atcttaaagg agtttgctcc atctattcct     360

gagaagaaca tcagttgttt gacccgccta gaccataaca gggcacttgg tcagatctct     420

gagagacttg atgtncaagt tagtgatgtg aanaatgnta tcatctggnc anctcactct     480

tncanncntt nccctgatgn nanccncgcc ncg                                  513


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gttctggttg ttgccaatcc agcaaacacc aatgctctta tcttaaagga gtttgctcca     180

tctattcctg agaagaacat cagttgtttg acccgcctag accataacag ggcacttggt     240

nagatctctg agagacttga tgtccaagtt agtgatgtga agaatgttat catctggggc     300

aatcactctt ccagtcagta ccctgatgtg aaccacgcca ccgtgaagac ttccagtggc     360

gagaagcctg ttcgcgaact tgttaaagac gatgaatggc taaatgcagg gttcattgcc     420

actgtccagc agcgtggtgc tgcaatcatc aaagcgagga agctttccag tgctcttttt     480

gctgccagct ctgcttgtga ccacatccgg gattgggttc tcggaacccc tganggaaca     540

tttgtttcca tgggtgtgta ttctgatggn tatacngggt gcctggtggg cttatctact     600

ccttnccagn aacttgctgn ggggggaat ggacaattgn tcaaaggctn ccnatcnacn     660

agtt                                                                 664
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<212>  DNA
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ccagcaaaca ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac     120

atcagttgtt tgacccgcct agaccataac agggcactcg gtcagatctc tgagagactt     180

gatgtccaag ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa     240

taccctgatg tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa     300

cttgttaaag acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt     360

gctgcaatca tcaaagcgag gaagctctcc agtgctctct ctgctgccag ctctgcttgt     420

gaccacatcc gtgattgggt tcttggaacc cctgagggaa catttgtttc catgggtgtg     480

tattctgatg gttcatacgg tgtgcctgct gggcttatct actccttccc agtaacttgc     540

tgcggtggtg aatggacaat tgttcaaggg ctcccgatcg acgagttctc aagaaagaag     600

atggatgcca cagcccagga gctctcggag gagaaggctc tcgcctactc gtgcctcgag     660

taactgcata ccagggagca gctgccgctc tgatgttttg aataaaagga acattttggc     720

tncatgaaac tcat   .                                                   734


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<213>  Lolium perenne


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agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag ttagtgatgt   180

gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg tgaaccacgc   240

caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag acgatgaatg   300

gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca tcaaagcgag   360

gaagctctcc agtgctctct ctgctgccag ctctgcttgt gaccacatcc gtgattgggt   420

tctcggaacc cctgagggaa catttgtttc catggntgtg tattctgatg gttcatacgg   480

tgtgcctgct gggcttatct actccttccc agtaacttgc tgcggtggtg aatggacaat   540

tgttcaaggg ctcccgatcg acgagttctc aagaaagaag atggatgcca gcccagga    600

gctctcgnag gagaaggctc tcgcctactc gtgcctcgag taactgcata ccagggagca   660

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<210>  103
<211>  667
<212>  DNA
<213>  Lolium perenne

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cataacaggg cacttggtca gatctctgag agacttgatg tccaagttag tgatgtgaag   180

aatgttatca tctggggcaa tcactcttcc agtcagtacc ctgatgtgaa ccacgccacc   240

gtgaagactt ccagtggcga gaagcctgtt cgcgaacttg ttaaagacga tgaatggcta   300

aatgcagggt tcattgccac tgtccagcag cgtggtgctg caatcatcaa agcgaggaag   360

ctctccagtg ctctctctgc tgccagctct gcttgtgacc acatccgtga ttgggttctc   420

ggaacccctg aggaacatt tgtttccatg ggtgtgtatt ctgatggttc atacggtgtg   480

cctgctgggc ttatctactc cttcccagta acttgctgcg gtggtgaatg gacaattgtt   540

caagggctcc cgatcgacga gttctcaaga aagaagatgg atgccacagc ccaggagctc   600

tcggaggaga aggctctcgc ctactcgtgc ctcgagtaac tgcataccag ggagcagctg   660

ccgctct                                                             667


<210>  104
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<213>  Lolium perenne


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cgagaagcct gttcgcgaac ttgttaaaga cgatgaatgg ctaaatgcag ggttcattgc    120

cactgtccag cagcgtggtg ctgcaatcat caaagcgagg aagctctcca gtgctctctc    180

tgctgccagc tctgcttgtg accacatccg tgattgggtt ctcggaaccc ctgagggaac    240

atttgtttcc atgggtgtgt attctgatgg ttcatacggt gtgcctgctg ggcttatcta    300

ctccttccca gtaacttgct gcggtggtga atggacaatt gttcaagggc tcccgatcga     360

cgagttctca agaaagaaga tggatgccac agcccaggag ctctcggagg agaaggctct    420

cgcctactcg tgcctcgagt aactgcatac cagggagcag ctgccgctct gatgttttga    480

ataaaaggaa cattttggct ccatgaaact catctccact cagaacagtt gcacatcgcg    540

gtgcctttag ctggtttttc cagtgtgtat gaatgaggct tttgtagctc tattttcgcc     600

tgatgattta caggacagga tattggcagg aagattggaa caatttgacg tctgattaaa    660

accaacctct tattattccc gtgtgtatga atgaggcttt tgtagctcta ttttcgcctg    720

atgatttaca ggccatgata ttggcagg                                       748


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tgctgcaatc atcaaagcga ggaagctctc cagtgctctc tctgctgcca gctctgcttg    180

tgaccacatc cgtgattggg ttctcggaac ccctgaggga acatttgttt ccatgggtgt    240

gtattctgat ggttcatacg gtgtgcctgc tgggcttatc tactccttcc cagtaacttg    300

ctgcggtggt gaatggacaa ttgttcaagg ctcccggtc gacgagttct caagaaagaa    360

gatggatgcc acagcccagg agctctcgga ggagaaggct cttgcctact cgtgcctcga    420

gtaactgcat accagggagc agctgccgct ctgatgtttt gaataaaagg aacattttgg    480

ctccatgaaa ctcatctcca ctcagaacag ttgcacatcg cggtgccttt agctggtttt    540

tccagtgtgt atgaatgagg cttttgtagc tctattttcg cctgatgatt tacaggacag    600

gatattggca ggaagattgg aacaatttga cgtctgatta aaacca               646


<210>  106
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<213>   Lolium perenne


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tctctctgct  gccagctctg  cttgtgacca  catccgtgat  tgggttctcg  gaacccctga     180
gggaacattt  gtttccatgg  gtgtgtattc  tgatggttca  tacggtgtgc  ctgctgggct     240
tatctactcc  ttcccagtaa  cttgctgcgg  tggtgaatgg  acaattgttc  aagggctccc     300
gatcgacgag  ttctcaagaa  agaagatgga  tgccacagcc  caggagctct  cggaggagaa     360
ggctctcgcc  tactcgtgcc  tcgagtaact  gcataccagg  gagcagctgc  cgctctgatg     420
ttttgaataa  aaggaacatt  ttggctccat  gaaactcatc  tccactcaga  acagttgcac     480
atcgcggtgc  cttcagctgg  tttttccagt  gtgtatgaat  gaggcttttg  tagctctatt     540
ttcgcctgat  gatttacagg  acaggatatt  ggcaggaaga  ttggaacaat  ttgacgtctg     600
attaaaacca  acctcttatt  attcctgtgt  gtatgaatga  ggcttttgta  gctctatttt     660
cgcctgatga  tttacaggcc  atgatattgg  caggaggatt  ggaacaattt  gacgcctgat     720
taaaaccaac  ctcttattac  taaaaaaaaa                                         750


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<212>   DNA
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ctgctgccag  ctctgcttgt  gaccacatcc  gtgattgggt  tctcggaacc  cctgagggaa      180
catttgtttc  catgggtgtg  tattctgatg  gttcatacgg  tgtgcctgct  gggcttatct      240
actccttccc  agtaacttgc  tgcggtggtg  aatggacaat  tgttcaaggg  ctcccgatcg      300
acgagttctc  aagaaagaag  atggatgcca  cagcccagga  gctctcggag  gagaaggctc      360
tcgcctactc  gtgcctcgag  taactgcata  ccagggagca  gctgccgctc  tgatgttttg      420
aataaaagga  acattttggc  tccatgaaac  tcatctccac  tcagaacagt  tgcacatcgc      480
ggtgccttta  gctggttttt  ccagtgtgta  tgaatgaggc  ttttgtagcg  ctattttcgc      540
ctgatgattt  acaggacagg  atattggcag  gaagattgga  acaatttgac  gtctgattaa      600
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aaccaacctc ttatta                                           616
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<212> DNA
<213> Lolium perenne


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gatgttttga ataaaaggaa cattttggct ccatgaaact catctccact cagaacagtt  180

gcacatcgcg gtgcctttag ctggtttttc cagtgtgtat gantgaggct tttgtagctc  240

tattttcgcc tgatgattta caggacagga tattggcagg aagattggaa caatttgacg  300

tctgattaaa accaacctct tattattcct gtgtgtatga atgaggcttt tgtagctcta  360

ttttcgcctg atgatttaca ggacatgata ttggcaggag gattggaaca annanann   418


<210> 109
<211> 265
<212> DNA
<213> Lolium perenne

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tgccgctctg atgttttgaa taaaaggaac attttggctc catgaaactc atctccactc  120

agaacagttg cacatcgcgg tgcctttagc tggttttttcc agtgtgtatg aatgaggctt  180

ttgtagctct attttcgcct gatgatttac aggacaggat attggcagga agattggaac  240

aatttgacgt ctgacaaaaa aaaaa                                        265
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<212>   DNA
<213>   Lolium perenne


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tgaggctttt gtagctctat tttcgcctga tgatttacag gccacgatat tggcaggagg       180

attggaacaa tttgacgcct gattaaaacc aacctcttat tattctaaaa aaaaaa          236


<210>   111
<211>   177
<212>   DNA
<213>   Lolium perenne


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<223>   n is a, c, g, or t

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ggggttgaca acngttngat gnnantgaca gaccntgctc ttngnngncg aggtncn         177


<210>   112
<211>   58
<212>   PRT
<213>   Lolium perenne


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<223>  Xaa can be any naturally occurring amino acid

<400>  112
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1   5   10   15

Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe Lys Lys Ala Gly
            20   25   30

Thr Tyr Asn Xaa Lys Arg Leu Leu Gly Val Asp Asn Xaa Xaa Met Xaa
        35   40   45

Xaa Thr Asp Xaa Ala Leu Xaa Xaa Arg Gly
50   55

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<210>  113
<211>  664
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<223>  n is a, c, g, or t

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ggacatggcg tcagctgtta caatcagttc agtcagcgcg caggccgctt tggtttcaaa       120
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M80678527.ST25

accaaggaac catggcagca cgagctacag tggcctaaag gcatcatcgt cgtcgatcag   180

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aagggttgtg ccaaaggcga agtctgggtc gcagatatcg cctcaggcat cttacaaggt   300

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tcctctggtc tcggagctgc gcctgtatga tatcgcgaat gtcaagggcg tcgctgcaga   420

tctcagccac tgcaacacgc ctgctcaggt catggacttc actggccccg cagagctagc   480

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Ala Gln Ala Ala Leu Val Ser Lys Pro Arg Asn His Gly Ser Thr Ser
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Tyr Ser Gly Leu Lys Ala Ser Ser Ser Ile Ser Phe Glu Ser Gly
    50   55   60

Thr Ser Phe Leu Gly Lys Thr Ala Ser Leu Arg Ala Thr Val Thr Thr
65   70   75   80

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Arg Val Val Pro Lys Ala Lys Ser Gly Ser Gln Ile Ser Pro Gln Ala
                   85   90   95

Ser Tyr Lys Val Ala Val Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro
               100   105   110

Leu Gly Leu Leu Ile Lys Met Ser Pro Leu Val Ser Glu Leu Arg Leu
           115   120   125

Tyr Asp Ile Ala Asn Val Lys Gly Val Ala Ala Asp Leu Ser His Cys
    130   135   140

Asn Thr Pro Ala Gln Val Met Asp Phe Thr Gly Pro Ala Glu Leu Ala
145   150   155   160

Glu Cys Leu Lys Gly Val Asp Val Val Ile Pro Ala Gly Val Pro
               165   170   175

Arg Lys Pro Gly Met Thr Arg Asp Asp Leu Phe Asn Xaa Asn Ala Gly
           180   185   190

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aagttggaga tggcatcagc tgttaccatc agctcagtca gcgcgcaggc cgctttggtc     180

tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc atcatcgtcg     240

atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg ggcgactatc     300

acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga tatcacctca ggcctcgtac     360

aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct gctgatcaag     420

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gcagatctca gccactgcaa cacgccttct caggtcatgg acttcactgg cccagcagaa     540

ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt cccaaggaag     600

ccaggcatga cccgtgatga ccttttttaac atcaatgcgg gcatcgtcaa gtcgcttatt     660

gaggctgttg cagacaactg ccctgaggcc ttcatccata tcatcagcaa cccggtcaac     720

tccactgtgc cgattgctgc tgagattctg aaacagaagg gcgtctacaa ccccaagaag     780

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aacctcagcc tcatcgatgt tgatgtccca gttgtcggtg ccatgctgg gatcacgatt     900

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atggctggtg atccagatgt ttacgagtgc acgtatgttc agtctgagtt aacagagctt    1140

ccattcttcg cgtccagagt taagcttggg aaggacggng ttgagtccat catttcctcc    1200

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Gln Phe Pro Ser Ala His Gln Pro Lys Leu Glu Met Ala Ser Ala Val
        35   40   45

Thr Ile Ser Ser Val Ser Ala Gln Ala Ala Leu Val Ser Lys Pro Arg
    50   55   60

Asn His Gly Ser Thr Ser Tyr Ser Gly Leu Lys Ala Ser Ser Ser Ser
65   70   75   80

Ile Ser Phe Glu Ser Gly Thr Ser Phe Leu Gly Lys Thr Ala Ser Leu
            85   90   95

Arg Ala Thr Ile Thr Ser Arg Ile Val Pro Lys Ala Lys Ser Gly Ser
            100   105   110

Gln Ile Ser Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly Ala Ala
        115   120   125

Gly Gly Ile Gly Gln Pro Leu Gly Leu Leu Ile Lys Met Ser Pro Leu
    130   135   140

Val Ser Glu Leu Arg Leu Tyr Asp Ile Ala Asn Val Lys Gly Val Ala
145   150   155   160

Ala Asp Leu Ser His Cys Asn Thr Pro Ser Gln Val Met Asp Phe Thr
                165   170   175

Gly Pro Ala Glu Leu Ala Asp Cys Leu Lys Gly Val Asp Val Val Val
            180   185   190

Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg Asp Asp Leu
        195   200   205

Phe Asn Ile Asn Ala Gly Ile Val Lys Ser Leu Ile Glu Ala Val Ala
    210   215   220

Asp Asn Cys Pro Glu Ala Phe Ile His Ile Ile Ser Asn Pro Val Asn
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Ser Thr Val Pro Ile Ala Ala Glu Ile Leu Lys Gln Lys Gly Val Tyr
            245   250   255

Asn Pro Lys Lys Leu Phe Gly Val Ser Thr Leu Asp Val Val Arg Ala
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Asn Thr Phe Val Ala Gln Lys Lys Asn Leu Ser Leu Ile Asp Val Asp

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Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro Leu Leu
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Leu Thr Lys Arg Ile Gln Asn Ala Gly Thr Glu Ala Val Glu Ala Lys
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Ala Gly Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala Ala Arg
        340   345   350

Phe Val Glu Ser Ser Leu Arg Ala Met Ala Gly Asp Pro Asp Val Tyr
    355   360   365

Glu Cys Thr Tyr Val Gln Ser Glu Leu Thr Glu Leu Pro Phe Phe Ala
    370   375   380

Ser Arg Val Lys Leu Gly Lys Asp Xaa Val Glu Ser Ile Ile Ser Ser
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gttggagatg gcatcagctg ttaccatcag ctcagtcagc gcgcaggccg ctttggtctc   180

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cagcttcgaa tcagggacat cattcctggg caagaccacc tctcttcggg cgactatcac   300

ctcaaggatt gtgccaaagg caaagtctgg gtctcagata tcacctcagg cctcgtacaa   360

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agatctcagn cactgcaaca cgccttctca ggtcatggac ttcactggcc cagcagaact   540

agctgactgc ttgaaaggtg ttgatgttgt cgncatccct gcgggtgtnc caaggaagcc   600

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agtcagcgcg caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag   180

tggcctaaag gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa   240

gaccgcctct cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc   300

tcagatatca cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg   360

tcaaccactg gcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga   420

tattgccaat gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt   480

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cggtcagcgc gcagtccgct ctggtttcga aaccaaggaa tcatggcagc acgagcttcg     180

gtggcctaaa ggcatcatcg gcgtcgatca gctttgaatc agggacatcg ttcctgggca     240

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gccaaccact gggcctgctg atcaagatgt ctcctctagt ctcagagctg cgcctgtatg     420

atattgccaa tgtcaagggc gtcgctgcag atcttagcca ctgcaacacg ccttctcagg     480

tcatggactt cactggcccc gcggaactag ccgactgctt gaaaggtgtg gatgttgtcg     540

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atgcgggcat cgtcaagtcg cttatcgagg ctgttgcaga caactgccct gaggccttca     660

tccatatcat cagcaacccg gtcaactcca cggtgccgat tgctgctgag attctgaaac     720

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gtcagcgcgc aggccgcttt ggtctcgaaa ccaaggaatc atggcagcac aagctacagt   180

ggcctaaagg catcatcatc gtcgatcagc ttcgaatcag ggacatcatt cctgggcaag   240

accgcctctc ttcgggcgac tatcacctca aggattgtgc caaaggcaaa gtctgggtct   300

cagatatcac ctcaggcctc gtacaaggtg gcggtgcttg gtgctgccgg tggcatcggt   360

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attgccaatg tcaagggagt cgctgcagat ctcagccact gcaacacgcc ttctcaggtc   480

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agtcagcgcg caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag    180
tggcctaaag gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa    240
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catggacttc actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgtcgt    540
catccctgcg ggtgtcccaa ggaagccagg cacgacccgt gatgacettt ttaacatcaa    600
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ggcctaaagg catcatcggc gtcgatcagc tttgaatcag ggacatcgtt cctgggcaag     240

actgcctccc tccgggcgac tgttacccca aggattgngc caaaggcaaa gtctgggtct     300

canatatcgc ctcaggcatc ttacaaggng gcggtgcttg gtgctgctgg tggcatcggt     360

caaccactgg gcctgctgat caanatgtct cctctggtct can                       403


<210> 123
<211> 561
<212> DNA
<213> Lolium perenne


<220>
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<222> (6)..(6)
<223> n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<222>  (554)..(554)
<223>  n is a, c, g, or t

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attcccatct gctcaccaac ccaagttgga gatggcatca gctgttacca tcagctcagt     120

cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat ggcagcacaa gctacagtgg     180

cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac     240

cgcctctctt cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca     300

gatatcacct caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca     360

accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat     420

tgccaatgtc aagggagtcg ctgcagatct cagccactgg aacacgcctt ctcaggtcat     480

ggacttgact ggcccagcag aactagctga ctgcttgaaa ggtgctgatg ttgncngcat     540

ccctgcggnn gtcncaagga a                                               561
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<210>  124
<211>  659
<212>  DNA
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<213>   Lolium perenne

<220>
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<223>   n is a, c, g, or t

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aattcccatc tgctcaccaa cccaagttgg agatggcatc agctgttacc atcagctcag   120

tcagcgcgca ggccgctttg gtctcgaaac caaggaatca tggcagcaca agctacagtg   180

gcctaaaggc atcatcatcg tcgatcagct tcgaatcagg gacatcattc ctgggcaaga   240

ccgcctctct tcgggcgact atcacctcaa ggattgtgcc aaaggcaaag cctgggtctc   300

agatatcacc tcaggcctcg tacaaggtgg cggtgcttgg tgctgccggt ggcatcggtc   360

aaccactggg cctgctgatc aagatgtctc ctctggtctc agagctgcgc ctgtatgata   420

ttgccaatgt caagggagtc gctgcagatc tcagccactg caacacgcct tctcaggtca   480

tggacttcac tggcccagca gaactagctg actgcttgaa aggtgttgat gttgtcgtca   540

tccctgcggg tgtcccaagg aagccaggca tgacccgtga tgaccttttt aacatcaatg   600

cgggcatcgt caagtcgctt attgaggctg ttgcagacaa ctcccctgag gccttcatc   659

<210>   125
<211>   706
<212>   DNA
<213>   Lolium perenne

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<223>   n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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aattcccatc tgctcaccaa cccaagttgg agatggcatc agctgttacc atcagctcag     120

tcagcgcgca ggccgctttg gtctcgaaac caaggaatca tggcagcaca agctacagtg     180

gcctaaaggc atcatcatcg tcgatcagct tcgaatcagg gacatcattc ctgggcaaga     240

ccgcctctct tcgggcgact atcacctcaa ggattgtgcc aaaggcaaag tctgggtctc     300

agatatcacc tcaggcctcg tacaaggtgg cggtgcttgg tgctgccggt ggcatcggtc     360

aaccactggg cctgctgatc aagatgtctc ctctggtctc agagctgcgc ctgtatgata     420

ttgccaatgt caagggagtc gctgcagatc tcagccactg caacacgcct tctcaggtca     480

tggacttcac tggcccagca gaactagctg gctgcttgaa aggtgttgat gttgtcgtca     540

tccctgcggg tgtcccaagg aagccaggca tgacccgtga tgacctttt aacatcaatg      600

cgggcatcgt caagtcgctt attgaggctg ttgcagacaa ctgccctgag gccttcatcc     660

atatcatcag caacccggtc aactncactg tgccgattgc tgctga                    706


<210>  126
<211>  706
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<222>  (24)..(25)
<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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attcccatct gctcaccaac ccaagttgga gatggcatca gctgttacca tcagctcagt     120

cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat ggcagcacaa gctacagtgg     180

cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac     240

cgcctctctt cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca     300

gatatcacct caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca     360

accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat     420

tgccaatgtc aagggagtcg ctgcagatct cagccactgc aacacgcctt ctcaggtcat     480

ggacttcact ggcccagcag aactagctga ctgcttgaaa ggtgttgatg ttgtcgtcat     540

ccctgcgggt gtcccaagga agccaggcat gacccgtgat gacctttta acatcaatgc     600

gggcatcgtc aagtcgctta ttgaggctgt tgcagacaac tgccctgagg ccttcatcca     660

tatcatcagc aacccggtca actccactgt gccgattgct gctgaa                    706
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<210>  127
<211>  802
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

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<221>  misc_feature
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<223>  n is a, c, g, or t

<220>
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<222> (801)..(801)
<223> n is a, c, g, or t

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ttcccatctg ctcaccaacc caagttggnc atggcatcag ctgttaccat cagttcggtc   120

agcgcgcagt ccgctctggt ttcgaaacca aggaatcatg gcagcacgag cttcggtggc   180

ctaaaggcat catcggcgtc gatcagcttt gaatcaggga catcgttcct gggcaagact   240

gnctccctcc gggcgactgt taccccaagg attgtgccaa aggcaaagtc tgggtctcag   300

atatcgcctc aggcatctta caaggtggcg gtgcttggtg ctgctggtgg catcggtcaa   360

ccactgggcc tgctgatcaa gatgtctcct ctggtctcag agctgcgcct gtatgatatt   420

gccaatgtca agggcgtcgc tgcagatctt agccactgca acacgccttc tcaggtcatg   480

gacttcactg gccccgcgga actagccgac tgcttgaaag gtgtggatgt tgtcgtcatc   540

cctgcgggtg tcccaaggaa gcctggcatg actcgtgatg accttttttaa catcaatgcg   600

ggcatcgtca agtcgcttat cgaggctgtt gcagacaact gccctgaggc cttcatccat   660

atcatcagca acccggtcaa ctccacggtg ccgattgctg ctgagattct gaaacagaag   720

ggcgtntaca accccaagaa gctcttcggg gtttccaccc tggatgttgt cagagctaac   780

acatttgtag ctcaaaanaa na   802

<210> 128
<211> 691
<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

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<221> misc_feature
<222> (10)..(10)
<223> n is a, c, g, or t

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<222> (14)..(14)
<223> n is a, c, g, or t

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<222> (19)..(19)
<223> n is a, c, g, or t

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<222> (24)..(25)
<223> n is a, c, g, or t

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<221> misc_feature
<222> (31)..(32)
<223> n is a, c, g, or t

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<222> (658)..(658)
<223> n is a, c, g, or t

<220>
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<222> (684)..(684)
<223> n is a, c, g, or t

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attcccatct gctcaccaac ccaagttggg catggcatca gctgttacca tcagctcagt     120

cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat ggcagcacaa gctacagtgg     180

cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac     240

cgcctctctt cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca     300

gatatcacct caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca     360

accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat     420

tgccaatgtc aagggagtcg ctgcagatct cagccactgc aacacgcctt ctcaggtcat     480

ggacttcact ggcccagcag aactagctga ctgcttgaaa ggtgttgatg ttgtcgtcat     540

ccctgcgggt gtcccaagga agccaggcat gacccgtgat gaccttttta acatcaatgc     600

gggcatcgtc aagtcgctta ttgaggctgt tgcagacaac tgccctgagg ccttcatnca     660

tatcatcagc aacccggtca actncactgt g                                    691
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<210> 129
<211> 705
<212> DNA
<213> Lolium perenne


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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<222> (36)..(36)
<223> n is a, c, g, or t
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<222> (683)..(683)
<223> n is a, c, g, or t

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ttcccatctg ctcaccaacc caagttggag atggcatcag ctgttaccat cagctcagtc   120

agcgcgcagg ccgctttggt ctcgaaacca aggaatcatg gcagcacaag ctacagtggc   180

ctaaaggcat catcatcgtc gatcagcttc gaatcangga catcattcct gggcaagacc   240

gcctctcttc gggcgactat cacctcaagg attgtgccaa aggcaaagtc tgggtctcag   300

atatcacctc aggcctcgta caaggtggcg gtgcttggtg ctgccggtgg catcggtcaa   360

ccactgggcc tgctgatcaa gatgtctcct ctggtctcag agctgcgcct gtatgatatt   420

gccaatgtca agggagtcgc tgcagatctc agccactgca acacgccttc tcaggtcatg   480

gacttcactg gcccagcaga actagctgac tgcttgaaag gtgttgatgt tgtcgtcatc   540

cctgcgggtg tctcaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg   600

ggcatcgtca agtcgcttat tgaggctgnt gcagacaact gccctgaggc cttcatccat   660

atcatcagca acccggtcaa ctncactgtg ccgattgctg ctgag   705

<210> 130
<211> 680
<212> DNA
<213> Lolium perenne

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<220>
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<222> (8)..(9)
<223> n is a, c, g, or t

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<222> (15)..(15)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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tcccatctgc tcaccaaccc aagttggaga tggcatcagc tgttaccatc agttcagtca       120

gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc       180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg       240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga       300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac       360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg       420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg       480

acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc       540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga ccttttтаac atcaatgcgg       600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatncata       660

tcatcagcaa cccggtcacn                                                   680
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<210>  131
<211>  705
<212>  DNA
<213>  Lolium perenne

<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
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<222> (28)..(28)
<223> n is a, c, g, or t

<400> 131
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cccgtctgct caccaaccca agttggagat ggcatcagct gttaccatca gctcagtcag   120

cgcgcaggcc gctttggtct cgaaaccaag gaatcatggc agcacaagct acagtggcct   180

aaaggcatca tcatcgtcga tcagcttcga atcagggaca tcattcctgg caagaccgc   240

ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat   300

atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc   360

actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgcctgt atgatattgc   420

caatgtcaag ggagtcgctg cagatctcag ccactgcaac acgccttctc aggtcatgga   480

cttcactggc ccagcagaac tagctgactg cttgaaaggt gttgatgttg tcgtcatccc   540

tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg   600

catcgtcaag tcgcttattg aggctgttgc agacaactgc cctgaggcct tcatccatat   660

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<210> 132
<211> 706
<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

<220>
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<222> (13)..(13)
<223> n is a, c, g, or t

<220>
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<222> (21)..(21)
<223> n is a, c, g, or t

<220>
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<222> (27)..(27)
<223> n is a, c, g, or t

<220>
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<222> (627)..(627)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (681)..(681)
<223> n is a, c, g, or t

<400> 132
acacannnaa aancaaaaag naccagnagc aaggggcgag ccggggcgca cgcagcaatt   60

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cccatctgct caccaaccca agttggagat ggcatcagct gttaccatca gctcagtcag    120

cgcgcaggcc gctttggtct cgaaaccaag gaatcatggc agcacaagct acagtggcct    180

aaaggcatca tcatcgtcga tcagcttcga atcagggaca tcattcctgg gcaagaccgc    240

ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat    300

atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc    360

actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgcctgt atgatattgc    420

caatgtcaag ggagtcgctg cagatctcag ccactgcaac acgccttctc aggtcatgga    480

cttcactggc ccagcagaac tagctgactg cttgaaaggt gttgatgttg tcgtcatccc    540

tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg    600

catcgtcaag tcgcttattg aggctgntgc agacaactgc cctgaggcct tcatccatat    660

catcagcaac ccggtcaact ncactgtgcc gattgctgct gagata               706
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<213>   Lolium perenne


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<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (26)..(27)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (87)..(87)
<223>   n is a, c, g, or t

<400>   133
cannnnaaaa acaaaaagnn nccagnngca aggggcgagc cggggcgcac gcagcaattc     60

ccatctgctc accaacccaa gttgggnatg gcatcagctg ttaccatcag ctcagtcagc    120

gcgcaggccg ctttggtctc gaaaccaagg aatcatggca gcacaagcta cagtggccta    180

aaggcatcat catcgtcgat cagcttcgaa tcagggacat cattcctggg caagaccgcc    240

tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata    300

tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cggtcaacca    360

ctgggcctgc tgatcaagat gtctcctctg gtctcagagc tgcgcctgta tgatattgcc    420

aatgtcaagg gagtcgctgc agatctcagc cactgcaaca cgccttctca ggtcatggac    480

ttcactggcc cagcagaact agctgactgc ttgaaaggtg ttgatgttgt cgtcatccct    540
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gcgggtgtcc caaggaagcc aggcatgacc cgtgatgacc tttttaacat caatgcgggc    600

atcgtcaagt cgcttattga ggctgttgca gaca                                634
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<210>  134
<211>  758
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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tcccatctgc tcaccaaccc aagttggaga tggcatcagc tgttaccatc agctcagtca   120

gcgcgcaggc cgccttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc   180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg .  240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct ·gggtctcaga   300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac   360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg   420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg   480

acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc .  540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg   600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata   660

tcatcagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg   720

gcgtctacaa ccccaagaag ctcttcgggg tttccacc                           758
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<211>  761
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<213>  Lolium perenne


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<223>  n is a, c, g, or t

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<220>
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<220>
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<223>  n is a, c, g, or t

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tcccatctgc tcaccaaccc aagttggaga tggcatcagc tgttaccatc agctcagtca     120

gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc     180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg     240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga     300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac     360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg     420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg     480
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acttcactgg cccagctgaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc   540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga ccttttttaac atcaatgcgg   600

gcatcgncaa gtcgcttatt gaggctgntg cagacaactg ccctgaggcc ttcatccata   660

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<211> 772
<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

<220>
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gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc   180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg   240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga   300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac   360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg   420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg   480

acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc   540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga ccttttttaac atcaatgcgg   600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata   660

tcatcagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg   720

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<210> 137
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<212> DNA
<213> Lolium perenne

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<223>  n is a, c, g, or t

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tcccatctgc tcaccaaccc aagttggaga tggcatcagc tgttaccatc agctcagtca     120

gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc     180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg     240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga     300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac     360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg     420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg     480

acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc     540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga ccttttttaac atcaatgcgg     600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata     660

tcatcagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg     720

gcgtctacaa ccccaagaag ctcttcgggg tttccaccct ggatgttgtc an             772


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<212>  DNA
<213>  Lolium perenne


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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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gcgcgcaggc cgccttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc     180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg     240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga     300
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tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac   360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg   420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg   480

acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc   540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga ccttttaac atcaatgcgg   600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata   660

tcatcagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg   720

gcgtctacaa ccccaagaag ctcttcgggg tttccaccct ggatgttgtc agagctaaca   780

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<223> n is a, c, g, or t

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<222> (12)..(12)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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catctgctca ccaacccaag ttggagatgg catcagctgt taccatcagc tcagtcagcg   120

cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa   180

aggcaccatc atcgtcgatc agcttcgaat cagggacatc attcctgggc aagaccgcct   240

ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat   300

cacctcaggc ctcgtacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac   360

tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcca   420

atgtcaaggg agtcgctgca gatctcagcc actgcaacac gccttctcag gtcatggact   480

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tcactggccc agcagaacta gctgactgct tgaaaggtgt tgatgttgtc gtcatccctg     540

cgggtgtccc aaggaagcca ggcatgaccc atgatgacct ttttaacatc aatgcgggca     600

tcgtcaagtc gcttattgag gctgttgc                                        628
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<221>   misc_feature
<222>   (18)..(19)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (26)..(27)
<223>   n is a, c, g, or t

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catctgctca ccaacccaag ttggagatgg catcagctgt taccatcagc tcagtcagcg     120

cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa     180

aggcatcatc atcgtcgatc agcttcgaat cagggacatc attcctgggc aagaccgcct     240

ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat     300

cacctcaggc ctcgtacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac     360

tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcca     420

atgtcaaggg agtcgctgca gatctcagcc gctgcaacac gccttctcag gtcatggact     480

tcactggccc agcagaacta gctgactgct tgagaggtgt tgatgttgtc gtcatccctg     540

cgggtgtccc aaggaagcca ggcatgaccc gtgatgacct ttttaacatc aatgcgggca     600

tcgtcaagtc gcttattgag gctgttgcag acaactgccc                           640
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<210>   141
<211>   698
<212>   DNA
<213>   Lolium perenne
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<223> n is a, c, g, or t

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<222> (18)..(19)
<223> n is a, c, g, or t

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<222> (25)..(25)
<223> n is a, c, g, or t

<400> 141
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catctgctca ccaacccaag ttggagatgg catcagctgt taccatcagc tcagtcagcg   120
cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa   180
aggcatcatc atcgtcgatc agcttcgaat cagggacatc attcctgggc aagaccgcct   240
ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat   300
cacctcaggc ctcgtacaag gtggcggtgt ttggtgctgc cggtggcatc ggtcaaccac   360
tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcca   420
atgtcaaggg agtcgctgca gatctcagcc actgcaacac gccttctcag gtcatggact   480
tcactggccc agcagaacta gctgactgct tgaaaggtgt tgatgttgtc gtcatccctg   540
cgggtgtccc aaggaagcca ggcatgaccc gtgatgacct ttttaacatc aatgcgggca   600
tcgtcaagtc gcttattgag gctgttgcag acaactgccc tgaggccttc atccatatca   660
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<212> DNA
<213> Lolium perenne

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<223>  n is a, c, g, or t

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cgcgcaggcc  gctttgatct  cgaaaccaag  gaatcctggc  agcacaagct  acagtggcct   180

aaaggcatca  tcatcgtcga  tcagcttcga  atcagggaca  tcattcctgg  gcaagaccgc   240

ctctcttcgg  gcgactatca  cctcaaggat  tgtgccaaag  gcaaagtctg  ggtctcagat   300

atcacctcag  gcctcgtaca  aggtggcggt  gcttggtgct  gccggtggca  tcggtcaacc   360

actgggcctg  ctgatcaaga  tgtctcctct  ggtctcagag  ctgcgcctgt  atgatattgc   420

caatgtcaag  ggagtcgctg  cagatctcag  ccactgcaac  acgccttctc  aggtcatgga   480

cttcactggc  ccagcagaac  tagctgactg  cttgaaaggt  gttgatgttg  tcgtcatccc   540

tgcgggtgtc  ccaaggaagc  caggcatgac  ccgtgatgac  ctttttaaca  tcaatgcggg   600

catcgtcaag  tcgcttattg  aggctgntgc  agacaactgc  cctgaggcct  tcatncatat   660

catcagcaac  ccggtcaact  ncactgtgcc  gattgctgct  gagattctga  aan          713


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<212>  DNA
<213>  Lolium perenne


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ccatctgctc accaacccaa gttggagatg gcatcagctg ttaccatcag ctcagtcagc   120

gcgcaggccg ctttggtctc gaaaccaagg aatcatggca gcacaagcta cagtggccta   180

aaggcatcat catcgtcgat cagcttcgaa tcagggacat cattcctggg caagaccgcc   240

tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata   300

tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cggtcaacca   360

ctgggcctgc tgaccaagat gtctcctctg gtctcagagc tgcgcctgta tgatattgcc   420

aatgtcaagg gagtcgctgc aggtctcagc cactgcaaca cgccttctca ggtcatggac   480

ttcactggtc cagcagaact agctgactgc ttgaaaggtg ttgatgttgt cgtcatccct   540

gcgggtgtcc caaggaagcc aggcatgacc cgtgatgacc tttttaacat caatgcgggc   600

atcgtcaagt cgcttattga ggctgttgca gacaactgcc ctgaggcctt catccatatc   660

atcagcaacc cggtcaactc cactgtgccg attgctgctg agattctgaa acagaagggc   720

gtctacaacc ccaagaagct cttcggggtt ccaccctgg atgttgtcag a   771
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cgcgcaggcc gctttggtct cgaaaccaag gaatcatggc agcacaagct acagtggcct   180

aaaggcatca tcatcgtcga tcagcttcga atcagggaca tcattcctgg gcaagaccgc   240

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atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc   360

actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgcctgt atgatattgc   420

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tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg   600

catcgtcaag tcgcttattg aggctgttgc agacaactgc cctgaggcct tcatccatat   660

catcagcaac ccggtcaact ccactgtgcc gattgctgct gagattctga aacagaaggg   720

cgtctacaac cccaagaagc tcttcggggt ttccaccctg gatgttgtca gag   773
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<212>  DNA
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<213> Lolium perenne

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aggccgcttt ggtctcgaaa ccaaggaatc atggcagcac aagctacagt ggcctaaagg   180

catcatcatc gtcgatcagc ttcgaatcag ggacatcatt cctgggcaag accgcctctc   240

ttcgggcgac tatcacctca aggattgtgc caaaggcaaa gtctgggtct cagatatcac   300

ctcaggcctc gtacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg   360

gcctgctgat caagatgtct cctctggtct cagaactgcg cctgtatgat attgccaatg   420

tcaagggagt cgctgcagat ctcagccact gcaacacgcc ttctcaggtc atggacttcg   480

ctggcccagc agaactagct gactgcttga aaggtgttga tgttgtcgtc atccctgcgg   540

gtgtnccaag gaagccaggc atgacccgtg atgacctttt taacatcaat gcgggcatcg   600

tcaagtcgct tattgaggct gttgcagaca actgccctga ggccttcatc catatcatca   660

gcaacccggt caacttcact gtgc   684

<210> 146
<211> 695
<212> DNA
<213> Lolium perenne

<220>
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<223> n is a, c, g, or t

<220>
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<222> (4)..(5)

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<223>   n is a, c, g, or t

<220>
<221>   misc_feature
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<223>   n is a, c, g, or t

<220>
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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (25)..(25)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (680)..(680)
<223>   n is a, c, g, or t

<400>   146
anannaaaan caaaaannan ccagnacgca aggggcgagc cggggcgcac gcagcaattc      60

ccatctgctc accaacccaa gttggagatg gcatcagctg ttaccatcag ctcagtcagc     120

gcgcaggccg ctttggtctc gaaaccaagg aatcatggca gcacaagcta cagtggccta     180

aaggcatcat catcgtcgat cagcttcgaa tcagggacat cattcctggg caagaccgcc     240

tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata     300

tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cggtcaacca     360

ctgggcctgc tgatcaagat gtctcctctg gtctcagagc tgcgcctgta tgatattgcc     420

aatgtcaagg gagtcgctgc agatctcagc cactgcaaca cgccttctca ggtcatggac     480

ttcactggcc cagcagaact agctgactgc ttgaaaggtg ttgatgttgt cgtcatccct     540

gcgggtgtcc caaggaagcc aggcatgacc cgtgatgacc tttttaacat caatgcgggc     600

atcgtcaagt cgcttattga ggctgttgca gacaactgcc ctgaggcctt catccatatc     660

atcagcaacc cggtcaactn cactgtgccg attgt                                695
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<210>   147
<211>   695
<212>   DNA
<213>   Lolium perenne

<220>
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<222>   (3)..(4)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (9)..(10)
<223>   n is a, c, g, or t
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<220>
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<222> (16)..(17)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (23)..(23)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (624)..(624)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (678)..(678)
<223> n is a, c, g, or t

<400> 147
aannaaaann aaaaannacc agnacgcaag gggcgagccg gggcgcacgc agcaattccc   60

atctgctcac caacccaagt tggagatggc atcagctgtt accatcagct cagtcagcgc   120

gcaggccgct ttggtctcga aaccaaggaa tcatggcagc acaagctaca gtggcctaaa   180

ggcatcatca tcgtcgatca gcttcgaatc agggacatca ttcctgggca agaccgcctc   240

tcttcgggcg actatcacct caaggattgt gccaaaggca aagtctgggt ctcagatatc   300

acctcaggcc tcgtacaagg tggcggtgct tggtgctgcc ggtggcatcg gtcaaccact   360

gggcctgctg atcaagatgt ctcctctggt ctcagagctg cgcctgtatg atattgccaa   420

tgtcaaggga gtcgctgcag atctcagcca ctgcaacacg ccttctcagg tcatggactt   480

cactggccca gcagaactag ctgactgctt gaaaggtgtt gatgttgtcg tcatccctgc   540

gggtgtccca aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat   600

cgtcaagtcg cttattgagg ctgntgcaga caactgccct gaggccttca tccatatcat   660

cagcaacccg gtcaactnca ctgtgccgat tgctg   695

<210> 148
<211> 637
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (1)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (9)..(9)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (15)..(16)
<223> n is a, c, g, or t

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<220>
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<222>  (18)..(18)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (23)..(23)
<223>  n is a, c, g, or t

<400>  148
nnnaaaaaana  aaaannancc  agnagcaagg  ggcgagccgg  ggcgcacgca  gcaattccca        60

tctgctcacc  aacccaagtt  ggagatggca  tcagctgtta  ccatcagctc  agtcagcgcg       120

caggccgctt  tggtctcgaa  accaaggaat  catggcagca  caagctacag  tggcctaaag       180

gcatcatcat  cgtcgatcag  cttcgaatca  gggacatcat  tcctgggcaa  gaccgcctct       240

cttcgggcga  ctatcacctc  aaggattgtg  ccaaaggcaa  agtctgggtc  tcagatatca       300

cctcaggcct  cgtacaaggt  ggcggtgctt  ggtgctgccg  gtggcatcgg  tcaaccactg       360

ggcctgctga  tcaagatgtc  tcctctggtc  tcagagctgc  gcctgtatga  tattgccaat       420

gtcaagggag  tcgctgcaga  tctcagccac  tgcaacacgc  cttctcaggt  catggacttc       480

actggcccag  cagaactagc  tgactgcttg  aaaggtgttg  atgttgtcgt  catccctgcg       540

ggtgtcccaa  ggaagccagg  catgacccgt  gatgaccttt  ttaacatcaa  tgcgggcatc       600

gtcaagtcgc  ttattgaggc  tgttgcagac  aactgcc                                  637


<210>  149
<211>  675
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (2)..(3)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (8)..(8)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (15)..(16)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (22)..(22)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (623)..(623)
<223>  n is a, c, g, or t

<400>  149
annaaaanca  aaaannacca  gnacgcaagg  ggcgagccgg  ggcgcacgca  gcaattccca        60
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M80678527.ST25

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tctgctcacc aacccaagtt ggagatggca tcagctgtta ccatcagctc aatcagcgcg      120

caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag tggcctaaag      180

gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa gaccgcctct      240

cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc tcagatatca      300

cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg      360

ggcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga tattgccaat      420

gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt catggacttc      480

actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgtcgt catccctgcg      540

ggtgtcccaa ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc      600

gtcaagtcgc ttattgaggc tgntgcagac aactgccctg aggccttcat ccatatcatc      660

agcaacccgg tcaac                                                       675
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<210>  150
<211>  764
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (1)..(1)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (720)..(720)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (741)..(741)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (745)..(745)
<223>  n is a, c, g, or t

<400>  150
nagaaaaaca aaaaagagcc agacgcaagg ggcgagccgg ggcgcacgca gcaattccca      60

tctgctcacc aacccaagtt ggagatggca tcagctgtta ccatcagctc agtcagcgcg      120

caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag tggcctaaag      180

gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa gaccgcctct      240

cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc tcagatatca      300

cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg      360

ggcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga tattgccaat      420

gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt catggacttc      480

actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgtcgt catccctgcg      540
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ggtgtcccaa ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc     600

gtcaagtcgc ttattgaggc tgttgcagac aactgccctg aggccttcat ccatatcatc     660

agcaacccgg tcaactccac tgtgccgatt gctgctgaga ttctgaaaca gaacggcgtn     720

tccacccccaa gaagctttc ngggnttaca ccctggatgt tgcc                      764
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<210>  151
<211>  785
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (393)..(393)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (745)..(745)
<223>  n is a, c, g, or t

<400>  151
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cagaaaaaag aaaagcagcc agacgcaagg ggcgagcccg ggcgcacgag caattcccat      60

ctgctcacca acccaagttg gacatggcat cagctgttac catcagttcg gtcagcgcgc     120

agtccgctct ggtttcgaaa ccaaggaatc atggcagcac gagcttcggt ggcctaaagg     180

catcatcggc gtcgatcagc tttgaatcag ggacatcgtt cctgggcaag actgcctccc     240

tccgggcgac tgttacccca aggattgtgc caaaggcaaa gtctgggtct cagatatcgc     300

ctcaggcatc ttacaaggtg gcggtgcttg gtgctgctgg tggcatcggt caaccactgg     360

gcctgctgat caagatgtct cctctggtct canagctgcg cctgtatgat attgccaatg     420

tcaagggcgt cgctgcagat cttagccact gcaacacgcc ttctcaggtc atggacttca     480

ctggccccgc ggaactagcc gactgcttga aggtgtgga tgttgtcgtc atccctgcgg      540

gtgtcccaag gaagcctggc atgactcgtg atgacctttt taacatcaat gcgggcatcg     600

tcaagtcgct tatcgaggct gttgcagaca actgccctga ggccttcatc catatcatca     660

gcaacccggt caactccacg gtgccgattg ctgctgagat tctgaaacag aagggcgtct     720

acaaccccaa gaagctcttc ggggnttcca ccctggatgt tgtcagagct aacacatttg     780

tagct                                                                 785
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<210>  152
<211>  706
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
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<220>
<221>   misc_feature
<222>   (7)..(7)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (14)..(15)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (21)..(21)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (676)..(676)
<223>   n is a, c, g, or t

<400>   152
anaaaancaa aaannaccag nacgcaaggg gcgagccggg gcgcacgcag caattcccat   60

ctgctcacca acccaagttg gagatggcat cagctgttac catcagctca gtcagcgcgc   120

aggccgcttt ggtctcgaaa ccaaggaatc atggcagcac aagctacagt ggcctaaagg   180

catcatcatc gtcgatcagc ttcgaatcag ggacatcatt cctgggcaag accgcctctc   240

ttcgggcgac tatcacctca aggattgtgc caaaggcaaa gtctgggtct cagatatcac   300

ctcaggcctc gtacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg   360

gcctgctgat caagatgtct cctctggtct cagagctgcg cctgtatgat attgccaatg   420

tcaagggagt cgctgcagat ctcagccact gcaacacgcc ttctcaggtc atggacttca   480

ctggcccagc agaactagct gactgcttga aaggtgttga tgttgtcgtc atccctgcgg   540

gtgtcccaag gaagccaggc atgacccgtg atgacctttt taacatcaat gcgggcatcg   600

tcaagtcgct tattgaggct gttgcagaca actgccctga ggccttcatc catatcatca   660

gcaacccggt caactncact gtgccgattg ctgctgagat tctgaa   706

<210>   153
<211>   682
<212>   DNA
<213>   Lolium perenne

<220>
<221>   misc_feature
<222>   (1)..(1)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (6)..(8)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (21)..(21)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (538)..(538)

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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (597)..(598)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (649)..(650)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (679)..(679)
<223> n is a, c, g, or t

<400> 153
naacannnaa aaacaaaaaa ngggcgagcc ggggcgcacg cagcaattcc catctgccca   60

ccaacccaag ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc   120

tctggtgtca aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcatcatc   180

atcgtcgatc agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc   240

gtcagtcacc ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc   300

atcttacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct   360

gatcaagatg tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg   420

cgtcgctgcc gatctcagcc accgcaacac gcctgctcag gtcatggact tcactggccc   480

cgcggaacta gcagagtgct tgaaaggcgt ggatgttgtc gtcatccctg cgggtgtncc   540

aaggaagcca ggcatgaccc gtgatgacct ttttaacatc aatgcggcat cgtcagnngc   600

ttatcgaggc tgttgcagac actgcctgag gccttatcca tattatcann acccgggact   660

gcacggtgcc gattgctgna at   682

<210> 154
<211> 712
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (8)..(8)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (10)..(11)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (16)..(16)
<223> n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (575)..(575)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (596)..(596)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (601)..(601)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (638)..(638)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (665)..(665)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (686)..(686)
<223>  n is a, c, g, or t

<400>  154
gnacacanan naaaancaaa aaaggggcga gccggggcgc acacagcaat tcccatctgc        60

ccaccaaccc aagttggaca tggcatcagc tgtcaccatc agttcagtca gcgcccaggc       120

cgctctggtg tcaaaaccaa ggagtcatgg cagcacgagc ttcagtggcc tgaaggcatc       180

atcatcgtcg atcagcttcg aatctggaac atcattcctg ggcaagactg cctctcttcg       240

ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct gggtctcaga tatcgcctca       300

ggcatcttac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct       360

gctgatcaag atgtcgcctc tggcctcgga gctgcgcctg tatgatattg cgaatgtcaa       420

gggcgtcgct gccgatctca gccactgcaa cacgcctgct caggtcatgg acttcactgg       480

ccccgcggaa ctagcagagt gcttgaaagg cgtggatgtt gtcgnatccc tgcgggtgtt       540

ccaaggaagc caggcatgac ccgtgatgac ctttntaaca tcaatgcggg catcgncaag       600

ncgcttatcg aggctgttgc agacaactgc cctgaggnct tgatccatat tatgagaacc       660

ccggncaact ccacggcgcc gattgntgca gagattctga aacagaaggc gt              712
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<210>  155
<211>  644
<212>  DNA
<213>  Lolium perenne
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<222>  (11)..(12)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (19)..(19)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (619)..(619)
<223>  n is a, c, g, or t

<400>  155
aaaccaaaaa nnacccagna gccaaggggc gagccggggc gcacgcagca attcccatct .   60

gctcaccaac ccaagttgga gatggcatca gctgttacca tcagctcagt cagcgcgcag    120

gccgctttgg tctcgaaacc aaggaatcat ggcagcacaa gctacagtgg cctaaaggca    180

tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac cgcctctctt    240

cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca gatatcacct    300

caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca accactgggc    360

ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat tgccaatgtc    420

aagggagtcg ctgcagatct cagccactgc aacacgcctt ctcaggtcat ggacttcact    480

ggcccagcag aactagctga ctgcttgaaa gggttgatgt tgtcgtcatc cctgcgggtg    540

tcccaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg ggcatcgtca    600

agtcgcttat tgaggctgnt gcagacaact gccctgaggc cttt                 .   644
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<210>  156
<211>  683
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (7)..(7)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (9)..(10)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (23)..(23)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (671)..(671)
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<223> n is a, c, g, or t

<400> 156
gncacanann aaaaacaaaa aangggcgag ccggggcgca cgcagcaatt cccatctgcc   60

caccaaccca agttggacat ggcatcagct gtcaccatca gttcagtcag cgcccaggcc   120

gctctggtgt caaaaccaag gagtcatggc agcacgagct tcagtggcct gaaggcatca   180

tcatcgtcga tcagcttcga atctggaaca tcattcctgg caagactgc ctctcttcgg   240

gcgtcagtca ccccgaggat tgtgccaaag gcaaagtctg ggtctcagat atcgcctcag   300

gcatcttaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc actgggcctg   360

ctgatcaaga tgtcgcctct ggtctcggag ctgcgcctgt atgatattgc gaatgtcaag   420

ggcgtcgctg ccgatctcag ccactgcaac acgcctgctc aggtcatgga cttcactggc   480

cccgcggaac tagcagagtg cttgaaaggc gtggatgttg tcgtcatccc tgcgggtgtc   540

ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg catcgtcaag   600

tcgcttatcg aggctgttgc agacaactgc cctgaggcct tcatccatat tatcagcaac   660

ccggtcaact ncacggtgcc gat   683

<210> 157
<211> 695
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (3)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (8)..(8)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (10)..(11)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (24)..(24)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (550)..(550)
<223> n is a, c, g, or t

<400> 157
gancccanan naaaaanaaa aaangggcga ccggggcgc acgcagcaat tcccatctgc   60

ccaccaaccc aagttggaca tggcatcagc tgtcaccatc agttcagtca gcgcccaggc   120

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cgctctggtg tcaaaaccaa ggagtcatgg cagcacgagc ttcagtggcc tgaaggcatc      180

atcatcgtcg atcagcttcg aatctggaac atcattcctg ggcaagactg cctctcttcg      240

ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct gggtctcaga tatcgcctca      300

ggcatcttac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct      360

gctgatcaag atgtcgcctc tggtctcgga gctgcgcctg tatgatattg cgaatgtcaa      420

gggcgtcgct gccgatctca gccactgcaa cacgcctgct ctggtcatgg acttcactgg      480

ccccgcggaa ctagcagagt gcttgaaagg cgtggatgtt gtcgtcatcc ctgcgggtgt      540

cccaaggaan ccaggcatga cccgtgatga ccttttaac atcaatgcgg gcatcgtcaa      600

gtcgcttatc gaggctgttg cagacaactg ccctgaggcc ttcatccata ttatcagcaa      660

cccggtcaac tccacggtgc cgattgctgc agaga                                 695
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<210>  158
<211>  802
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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<221>  misc_feature
<222>  (740)..(740)
<223>  n is a, c, g, or t

<220>
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<222>  (773)..(773)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (780)..(780)
<223>  n is a, c, g, or t

<220>
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<222>  (783)..(783)
<223>  n is a, c, g, or t

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caacccaagt tggacatggc atcagctgnc accatcagtt cagtcagcgc ccaggccgct      120

ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcatcatca      180

tcgtcgatca gcttcgaatc tggaacatca ttcctgggca agactgcctc tcttcgggcg      240

tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatatc gcctcaggca      300
```

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```
tcttacaagg  tggtggtgct  tggtgctgct  ggtggcatcg  gtcaaccact  gggcctgctg      360

atcaagatgt  ctcctctggt  ctcagagctg  cgcctgtatg  atattgccaa  tgtcaagggc      420

gtcgctgcag  atcttagcca  ctgcaacacg  ccttctcagg  tcatggactt  cactggcccc      480

gcggaactag  ccgactgctt  gaaaggtgtg  gatgttgtcg  tcatccctgc  gggtgtccca      540

aggaagcctg  gcatgactcg  tgatgacctt  tttaacatca  atgcgggcat  cgtcaagtcg      600

cttatcgagg  ctgttgcaga  caactgccct  gaggccttca  tccatatcat  cagcaacccg      660

gtcaactcca  cggtgccgat  tgctgctgag  attctgaaac  agaagggcgt  ctacaacccc      720

aagaagctct  tcggggtttn  caccctggat  gttgtcagag  ctaacacatt  tgnagctcan      780

aanaagaacc  tcagtcttat  cg                                                 802
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<211>  637
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (10)..(11)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (18)..(19)
<223>  n is a, c, g, or t

<400>  159
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tcaccaaccc  aagttggaga  tggcatcagc  tgttaccatc  agctcagtca  gcgcgcaggc     120

cgctttggtc  tcgaaaccaa  ggaatcatgg  cagcacaagc  tacagtggcc  taaaggcatc     180

atcatcgtcg  atcagcttcg  aatcagggac  atcattcctg  ggcaagaccg  cctctcttcg     240

ggcgactatc  acctcaagga  ttgtgccaaa  ggcaaagtct  gggtctcaga  tatcacctca     300

ggcctcgtac  aaggtggcgg  tgcttggtgc  tgccggtggc  atcggtcaac  cactgggcct     360

gctgatcaag  atgtctcctc  tggtctcaga  gctgcgcctg  tatgatattg  ccaatgtcaa     420

gggagtcgct  gcagatctca  gccactgcaa  cacgccttct  caggtcatgg  acttcactgg     480

cccagcagaa  ctagctgact  gcttgaaagg  tgttgatgtt  gtcgtcatcc  ctgcgggtgt     540

cccaaggaag  ccagacaact  gccctgaggc  cttcatccat  atcatcagca  acccggtcaa     600

ctccactgtg  ccgattgctg  ctgagatcta  aacagaa                               637
```

```
<210>  160
<211>  686
<212>  DNA
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<213> Lolium perenne

<220>
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<222> (3)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (11)..(12)
<223> n is a, c, g, or t   .

<220>
<221> misc_feature
<222> (18)..(18)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (673)..(673)
<223> n is a, c, g, or t

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ctcaccaacc caagttggag atggcatcag ctgttaccat cagctcagtc agcgcgcagg   120 .

ccgctttggt ctcgaaacca aggaatcatg gcagcacaag ctacagtggc ctaaaggcat   180

catcatcgtc gatcagcttc gaatcaggga catcattcct gggcaagacc gcctctcttc   240

gggcgactat cacctcaagg attgtgccaa aggcaaagtc tgggtctcag atatcacctc   300

aggcctcgta caaggtggcg gtgcttggtg ctgccggtgg catcggtcaa ccactgggcc   360

tgctgatcaa gatgtctcct ctggtctcag agctgcgcct gtatgatatt gccaatgtca   420

agggagtcgc tgcagatctc agccactgca acacgccttc tcaggtcatg gacttcactg   480

gcccagcaga actagctgac tgcttgaaag gtgttgatgt tgtcgtcatc cctgcgggtg   540

tcccaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg ggcatcgtca   600

agtcgcttat tgaggctgtt gcagacaact gccctgaggc cttcatccat atcatcagca   660

acccggtcaa ctncactgtg ccgatt   686 :

<210> 161
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<212> DNA
<213> Lolium perenne

<220>
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<222> (11)..(11)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (672)..(672)

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<223> n is a, c, g, or t

<400> 161
aaacaaaaaa naccagnacg caaggggcga gccggggcgc acgcagcaat tcccatctgc   60

tcaccaaccc aagttggaga tggcatcagc tgttaccatc agctcagtca gcgcgcaggc   120

cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc   180

atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg   240

ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga tatcacctca   300

ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct   360

gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg ccaatgtcaa   420

gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg gcttcactgg   480

cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt   540

cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg gcatcgtcaa   600

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<210> 162
<211> 647
<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

<220>
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<222> (8)..(9)
<223> n is a, c, g, or t

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<222> (15)..(15)
<223> n is a, c, g, or t

<220>
<221> misc_feature
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<223> n is a, c, g, or t

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accaacccaa gttggacatg gcatcagctg tcaccatcag ttcagtcagc gcccaggccg   120

ctctggtgtc aaaaccaagg agtcatggca gcacgagctt cagtggcctg aaggcatcat   180

catcgtcgat cagcttcgaa tctggaacat cattcctggg caagactgcc tctcttcggg   240

cgtcagtcac cccgaggatt gtgccaaagg caaagtctgg gtctcagata tcgcctcagg   300

catcttacaa ggtggcggtg cttggtgctg ccggtggcat cggtcaacca ctgggcctgc   360

tgatcaagat gtcgcctctg gtctcggagc tgcgcctgta tgatattgcg aatgtcaagg   420

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gcgtcgctgc cgatctcagc cactgcaaca cgcctgctca ggtcatggac ttcactggcc      480

ccgcggaact agcagagtgc ttgaaaggcg tggatgttgt cgtcatccct gcgggtgtcc      540

caaggaagcc aggcatgacc cgtgatgacc tttttaacat caatgcgggc atcgtcaagt      600

cgcttatcga ggctgttgca gacaactgcc ctgaggcctt catccat                    647
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<211>  661
<212>  DNA
<213>  Lolium perenne


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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
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<223>  n is a, c, g, or t

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tcaccaaccc aagttggaga tggcatcagc tgttaccatc agctcagtca gcgcgcaggc      120

cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc      180

atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg      240

ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga tatcacctca      300

ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct      360

gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg ccaatgtcaa      420

gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg acttcactgg .    480

cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt      540

cccaaggaag ccaggcatga cccgtgatga ccttttttaac atcaatgcgg gcatcgtcaa      600

gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata tcatcagcaa      660

c                                                                      661
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<210>  164
<211>  640
<212>  DNA
<213>  Lolium perenne


<220>
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<222>  (2)..(4)
<223>  n is a, c, g, or t
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<222> (7)..(7)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (13)..(13)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (18)..(18)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (20)..(20)
<223> n is a, c, g, or t

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caacccaagt tggacatggc atcagctgtc accatcagtt cagtcagcgc ccaggccgct     120

ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcatcatca     180

tcgtcgatca gcttcgaatc tggaacatca ttcctgggca agactgcctc tcttcgggcg     240

tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatatc gcctcaggca     300

tcttacaagg tggcggtgct tggtgctgcc ggtggcatcg tcaaccact gggcctgctg      360

atcaagatgt cgcctctggt ctcggagctg cgcctgtatg atattgcgaa tgtcaagggc     420

gtcgctgccg acctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc     480

gcggaactag cagagtgctt gaaaggcgtg gatgttgtcg tcatccctgc gggtgtccca     540

aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg     600

cttatcgagg ctgttgcaga caactgccct gaggccttca                           640
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<210> 165
<211> 681
<212> DNA
<213> Lolium perenne


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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (5)..(6)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (19)..(19)
<223> n is a, c, g, or t

<400> 165
canannaaaa acaaaaaang ggcgagccgg ggcgcacgca gcaattccca tctgcccacc     60
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tggtgtcaaa accaaggagt catggcagca cgagcttcag tggcctgaag gcatcatcat    180

cgtcgatcag cttcgaatct ggaacatcat tcctgggcaa gactgcctct cttcgggcgt    240

cagtcacccc gaggattgtg ccaaaggcaa agtctgggtc tcagatatcg cctcaggcat    300

cttacaaggt ggcggtgctt ggtgctgccg gtggcatcgg ttaaccactg ggcctgctga    360

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tcgctgccga tctcagccac tgcaacacgc ctgctcaggt catggacttc actggccccg    480

cggaactagc agagtgcttg aaaggcgtgg atgttgtcgt catccctgcg ggtgtcccaa    540

ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc gtcaagtcgc    600

ttatcgaggc tgttgcagac aactgccctg aggccttcat ccatattatc agcaacccgg    660

tcaactccac ggtgccgatt g                                              681
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<210> 166
<211> 741
<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

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ccaacccaag ttggacatgg catctgctgt caccatcagt tcagtcagcg cccaggccgc    120

tctggtgtca aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcatcatc    180

atcgtcgatc agcttcgaat ctggagcatc attcctgggc aagactgcct ctcttcgggc    240

gtcagtcacc ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc    300

atctcacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct    360

gatcaagatg tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg    420

cgtcgctgcc gatctcagcc actgcaacac gcctgctcag gtcatggact tcactggccc    480

cgcggaacta gcagagtgct tgaaaggcgt ggatgttgtc gtcatccctg cgggtgtccc    540

aaggaagcca ggcatgaccc gtgatgacct ttttaacatc aatgcgggca tcgtcaagtc    600

gcttatcgag gctgttgcag acaactgccc tgaggccttc atccatatta tcagcaaccc    660

ggtcaactcc acggtgccga ttgctgcaga gattctgaaa cagaagggcg tctacaaccc    720

caagaagctc ttcggggttt c                                              741
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<210> 167
<211> 665
<212> DNA
<213> Lolium perenne

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<220>
<221>  misc_feature
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<221>  misc_feature
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (664)..(664)
<223>  n is a, c, g, or t

<400>  167
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caacccaagt tggacatggc atcagctgtc accatcagtt cagtcagcgc ccaggccgct   120

ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcatcatca   180

tcgtcgatca gcttcgaatc tggaacatca ttcctgggca agactgcctc tcttcgggcg   240

tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatatc gcctcaggca   300

tcttacaagg tggcggtgct tggtgctgcc ggtggcatcg gtcaaccact gggcctgctg   360

atcaagatgt cgcctctggt ctcggagctg cgcctgtatg atattgcgaa tgtcaagggc   420

gtcgctgccg atctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc   480

gcggaactag cagagtgctt gaaaggcgtg gatgttgtcg tcatccctgc gggtgtccca   540

aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg   600

cttatcgagg ctgntgcaga caactgccct gaggccttca tccatattat cagcaacccg   660

gtcna                                                              665
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<211>  680
<212>  DNA
<213>  Lolium perenne

<220>
<221>  misc_feature
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (5)..(6)
<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

<220>
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<220>
<221>  misc_feature
<222>  (19)..(19)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (667)..(667)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (680)..(680)
<223>  n is a, c, g, or t

<400>  168
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canannaaaa	ananaaaang	ggcgagccgg	ggcgcacgca	gcaattccca	tctgcccacc	60
aacccaagtt	ggacatggca	tcagctgtca	ccatcagttc	agtcagcgcc	caggccgctc	120
tggtgtcaaa	accaaggagt	catggcagca	cgagcttcag	tggcctgaag	gcatcatcat	180
cgtcgatcag	cttcgaatct	ggaacatcat	tcctgggcaa	gactgcctct	cttcgggcgt	240
cagccacccc	gaggattgtg	ccaaaggcaa	agtctgggtc	tcagatatcg	cctcaggcat	300
cttacaaggt	ggcggtgctt	ggtgctgccg	gtggcatcgg	tcaaccactg	ggcctgctga	360
tcaagatgtc	gcctctggtc	tcggagctgc	gcctgtatga	tattgcgaat	gtcaagggcg	420
tcgctgccga	tctcagccac	tgcaacacgc	ctgctcaggt	catggacttc	actggccccg	480
cggaactagc	agagtgcttg	aaaggcgtgg	atgttgtcgt	catccctgcg	ggtgtcccaa	540
ggaagccagg	catgacccgt	gatgaccttt	ttaacatcaa	tgcgggcatc	gtcaagtcgc	600
ttatcgaggc	tgttgcagac	aactgccctg	aggccttcat	ccatattatc	agcaacccgg	660
tcaactncac	ggtgccgatn					680

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<210>  169
<211>  770
<212>  DNA
<213>  Lolium perenne

<400>  169
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caacccaagt	tggacatggc	atcagccgtc	accatcagtt	cagtcagcgc	ccaggccgct	120
ctggtgtcaa	aaccaaggag	tcatggcagc	acgagcttca	gtggcctgaa	ggcatcatca	180
tcgtcgatca	gcttcgaatc	tggaacatca	ttcctgggca	agactgcctc	tcttcgggcg	240
tcagtcaccc	cgaggattgt	gccaaaggca	aagtctgggt	ctcagatatc	gcctcaggca	300
tcttacaagg	tggcggtgct	tggtgctgcc	ggtggcatcg	gtcaaccact	gggcctgctg	360

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atcaagatgt cgcctctggt ctcggagctg cgcctgtatg atattgcgaa tgtcaagggc      420

gtcgctgccg atctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc      480

gcggaactag cagagtgctt gaaaggcgtg gatgttgtcg tcatccctgc gggtgtccca      540

aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg      600

cttatcgagg ctgttgcaga caactgccct gaggccttca tccatattat cagcaacccg      660

gtcaactcca cggtgccgat tgctgcagag attctgaaac agaagggcgt ctacaacccc      720

aagaagctct tcggggtttc caccctggat gttgtcaggg ctaacacatt              770
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<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
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<222>  (4)..(5)
<223>  n is a, c, g, or t

<220>
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<222>  (11)..(11)
<223>  n is a, c, g, or t

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<222>  (18)..(18)
<223>  n is a, c, g, or t

<400>  170
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acccaagttg gacatggcat cagctgtcac catcagttca gtcagcgccc aggccgctct     120

ggtgtcaaaa ccaaggagtc atggcagcac gagcttcagt ggcctgaagg catcatcatc     180

gtcgatcagc ttcgaatctg gaacatcatt cctgggcaag actgcctctc ttcgggcgtc     240

agtcaccccg aggattgtgc caaaggcaaa gtctgggtct cagatatcgc ctcaggcatc     300

ttacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg gcctgctgat     360

caagatgtcg cctctggtct cggagctgcg cctgtatgat attgcgaatg tcaagggcgt     420

cgctgccgat ctcagccact gcaacacgcc tgctcaggtc atggacttca ctggccccgc     480

ggaactagca gagtgcttga aaggcgtgga tgttgtcgtc atccctgcgg gtgtcccaag     540

gaagccaggc atgacccgtg atgacctttt taacatcaat gcgggcatcg tcaagtcgct     600

tatcgaggct gttgcagaca actgccctga ggccttcatc catattatca gcaacccggt     660

caactccacg gtgccgattg ctgcagagat tctgaaacag ag                       702
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<210>  171
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<211>  777
<212>  DNA
<213>  Lolium perenne

<400>  171
cagaaaaaga aaaaaagggg cgagccgggg cgcacgcagc aattcccatc tgcccaccaa      60

cccaagttgg acatggcatc agctgtcacc atcagttcag tcagcgccca ggccgctctg     120

gtgtcaaaac caaggagtca tggcagcacg agcttcagtg gcctgaaggc atcatcatcg     180

tcgatcagct tcgaatctgg aacatcattc ctgggcaaga ctgcctctct tcgggcgtca     240

gtcaccccga ggattgtgcc aaaggcaaag tctgggtctc agatatcgcc tcaggcatct     300

tacaaggtgg cggtgcttgg tgctgccggt ggcatcggtc aaccactggg cctgctgatc     360

aagatgtcgc ctctggtctc ggagctgcgc ctgtatgata ttgcgaatgt caagggcgtc     420

gctgccgatc tcagccactg caacacgcct gctcaggtca tggacttcac tggccccgcg     480

gaactagcag agtgcttgaa aggcgtggat gttgtcgtca tccctgcggg tgtcccaagg     540

aagccaggca tgacccgtga tgaccttttt aacatcaatg cgggcatcgt caagtcgctt     600

atcgaggctg ttgcagacaa ctgccctgag gccttcatcc atattatcag caacccggtc     660

aactccacgg tgccgattgc tgcagagatt ctgaaacaga agggcgtcta caaccccaag     720

aagctcttcg gggtttcccc cctggatgtt gtcagggcta acacatttgt agctcaa       777


<210>  172
<211>  707
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (11)..(11)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (659)..(659)
<223>  n is a, c, g, or t

<400>  172
aaaaaaanaa ngggcgagcc ggggcgcacg cagcaattcc catctgccca ccaacccaag      60

ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc tctggtgtca     120

aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcatcatc atcgtcgatc     180

agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc gtcagtcacc     240

ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc atcttacaag     300

gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct gatcaagatg     360

tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg cgtcgctgcc     420
```

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```
gatctcagcc actgcaacac gcctgctcag gtcatggact tcactggccc cgcggaacta      480

gcagagtgct tgaaaggcgt ggatgttgtc gtcatccctg cgggtgtccc aaggaagcca      540

ggcatgaccc gtgatgacct ttttaacatc aatgcgggca tcgtcaagtc gcttatcgag      600

gctgttgcag acaactgccc tgaggccttc atccatatta tcagcaaccc ggtcaactnc      660

acggtgccga ttgctgcaga gattctgaaa caaaaggcgt ctacaac                    707
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<210>  173
<211>  687
<212>  DNA
<213>  Lolium perenne


<220>
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<222>  (3)..(4)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (11)..(11)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (571)..(571)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (605)..(605)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (665)..(665)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (674)..(674)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (680)..(680)
<223>  n is a, c, g, or t

<400>  173
aannaaaaaa ngggcgagcc ggggcgcacg cagcaattcc catctgccca ccaacccaag      60

ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc tctggtgtca      120

aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcatcatc atcgtcgatc      180

agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc gtcagtcacc      240

ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc atcttacaag      300
```

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```
gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct gatcaagatg    360

tcgcctctgg tctcggagct gcgcccgtat gataatgcga atgtcaaggg cgtcgctgcc    420

gatctcagcc actgcaacac gcctgctcag gtcatggact tcactggccc cgcggaacta    480

gcagagtgct tgaaaggcgt ggatgctgtc gtcatccctg cgggtgtccc aaggaagcca    540

ggcatgaccc gtgatgacct ttttaacatc natgcgggca tcgtcaagtc gcttatcgag    600

gctgntgcag acaactgccc tgaggccttc atccatatta tcagcaaccc ggtcnactcc    660

acggngccga ttgntgcaan attttgc                                        687
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<210> 174
<211> 473
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (211)..(211)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (258)..(258)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (354)..(355)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (369)..(369)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (397)..(397)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (421)..(422)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (441)..(441)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (445)..(445)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (461)..(461)
<223> n is a, c, g, or t

<220>
<221> misc_feature

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<222> (465)..(465)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (468)..(468)
<223> n is a, c, g, or t

<400> 174
caaggggcga gccggggcgc acgcagcaat tcccatctgc tcaccaaccc aagttggaga      60

tggcatcagc tgttaccatc agctcagtca gcgcgcaggc cgctttggtc tcgaaaccaa     120

ggaatcatgg cagcacaagc tacagtggcc taaaggcatc atcatcgtcg atcagcttcg     180

aatcagggcc atcattcctg dacaagaccg nctctcttcg ggcgactatc acctcaagga     240

ttgtgccaaa ggcaaagnct gggtctcaga tatcacctca ggcctcgtac aaggtggcgg     300

tgcttggtgc tgccggtggc atcggtcaac cactgggcct gctgatcaag atgnntcctc     360

tggtctcana gctgcgcctg tatgatattg ccaatgncaa gggagtcgct gcaaatctca     420

nncactgcaa cacgccttct naggncatgg acttcactgg nccancanaa cta           473
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<210> 175
<211> 642
<212> DNA
<213> Lolium perenne


<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (9)..(10)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (38)..(38)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (478)..(478)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (641)..(641)
<223> n is a, c, g, or t

<400> 175
anaggggcnn gccggggcgc cgcgaattcc atctgccncc accaagttgg acatggcatc      60

agctgtacca tcagttagta gcgcccaggc cgctctggtg taaaaccaag gagtcatggc     120

agcacgagct tcagtggcct gaaggcatca tcatcgtcga tcagcttcga atctggaaca     180

tcattcctgg gcaagactgc ctctcttcgg gcgtcagtca ccccgaggat tgtgccaaag     240

gcaaagtctg ggtctcagat atcgcctcag gcatcttaca aggtggcggt gcttggtgct     300
```

```
                              M80678527.ST25
gctggtggca tcggtcaacc actgggcctg ctgatcaaga tgtctcctct ggtctcagag    360

ctgcgcctgt atgatattgc caatgtcaag ggcgtcgctg cagatcttag ccactgcaac    420

acgccttctc aggtcatgga cttcactggc cccgcggaac tagccgactg cttgaaangt    480

gtggatgttg tcgtcatccc tgcgggtgtc ccaaggaagc ctggcatgac tcgtgatgac    540

ctttttaaca tcaatgcggg catcgccaag tcgcttatca aggctgttgc agacaactcc    600

cttgaggcct tcatccatat catcagcaac ccggtcaact nc                       642
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<210>  176
<211>  767
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (12)..(12)
<223>  n is a, c, g, or t

<400>  176
ggagccgggg cnccgcagca attcccatct gctcaccaac ccaagttgga gatggcatca     60

gctgttacca tcagctcagt cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat    120

ggcagcacaa gctacagtgg cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg    180

acatcattcc tgggcaagac cgcctctctt cgggcgacta tcacctcaag gattgtgcca    240

aaggcaaagt ctgggtctca gatatcacct caggcctcgt acaaggtggc ggtgcttggt    300

gctgccggtg gcatcggtca accactgggc ctgctgatca agatgtctcc tctggtctca    360

gagctgcgcc tgtatgatat tgccaatgtc aagggagtcg ctgcagatct cagccactgc    420

aacacgcctt ctcaggtcat ggacttcact ggcccagcag aactagctga ctgcttgaaa    480

ggtgttgatg ttgtcgtcat ccctgcgggt gtcccaagga agccaggcat gacccgtgat    540

gaccttttta acatcaatgc gggcatcgtc aagtcgctta ttgaggctgt tgcagacaac    600

tgccctgagg ccttcatcca tatcatcagc aacccggtca actccactgt gccgattgct    660

gctgagattc tgaaacagaa gggcgtctac aaccccaaga agctcttcgg ggtttccacc    720

ctggatgttg tcagagctaa cacatttgta gctcagaaga agaacct                  767
```

```
<210>  177
<211>  701
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (637)..(637)
<223>  n is a, c, g, or t

<400>  177
gggggcgcac gcacaattcc catctgctca ccaacccatt ggagatggca tcagctgtta     60

ccatcagctc agtcagcgcg caggccgctt tggtctcgaa accaaggaat catggcagca    120
```

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```
caagctacag tggcctaaag gcatcatcat cgtcgatcag cttcgaatca gggacatcat        180

tcctgggcaa gaccgcctct cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa        240

agtctgggtc tcagatatca ccccaggcct cgtacaaggt ggcggtgctt ggtgctgccg        300

gtggcatcgg tcaaccactg ggcctgctga tcaagatgtc tcctctggtc tcagagctgc        360

gcctgtatga tattgccaat gtcaagggag tcgctgcaga tctcagccac tgcaacacgc        420

cttctcaggt catggacttc actggcccag cagaactagc tgactgcttg aaaggtgttg        480

atgttgtcgt catccctgcg ggtgtcccaa ggaagccagg catgacccgt gatgaccttt        540

ttaacatcaa tgcgggcatc gtcaagtcgc ttattgaggc tgttgcagac aactgccctg        600

aggccttcat ccatatcatc agcaacccgg tcaactncac tgtgccgatt gctgctgaga        660

ttctgaaaca gaagggcgtc tacagcccca agaagctctt a                           701
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<210>  178
<211>  333
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (1)..(1)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (17)..(17)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (33)..(33)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (281)..(281)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (293)..(293)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (297)..(297)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (303)..(303)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (327)..(327)
<223>  n is a, c, g, or t

<400>  178
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M80678527.ST25
```
ncagcagcaa ttccctnctg cccaccaacc canttggaca tggcatcagc tgtcaccatc        60

agttcagtca gcgcccaggc cgctctggtg tcaaaaccaa ggagtcatgg cagcacgagc       120

ttcagtggcc tgaaggcatc atcatcgtcg atcagcttcg aatctggaac atcattcctg       180

ggcaagactg cctctcttcg ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct       240

gggtctcaga tatcgcctca ggcatcttac aaggtggcgg ngcttggtgc tgncggnggc       300

atnggccaac cactgggcct gctgatnaag atg                                    333
```

<210> 179
<211> 630
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (16)..(17)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (33)..(33)
<223> n is a, c, g, or t

<400> 179
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gncacnacat tccccnnctg cccaccaacc canttggaat ggcatcagct gtcaccatca        60

gttcagtcag cgcccaggcc gctctggtgt caaaaccaag gagtcatggc agcacgagct       120

tcagtggcct gaaggcatca tcatcgtcga tcagcttcga atctggaaca tcattcctgg       180

gcaagactgc ctctcttcgg gcgtcagtca ccccgaggat tgtgccaaag gcaaagtctg       240

ggtctcagat atcgcctcag gcatcttaca aggtggcggt gcttggtgct gccggtggca       300

tcggtcaacc actgggcctg ctgatcaaga tgtcgcctct ggtctcggag ctgcgcctgt       360

atgatattgc gaatgtcaag ggcgtcgctg ccgatctcag ccactgcaac acgcctgctc       420

aggtcatgga cttcactggc cccgcggaac tagcagagtg cttgaaaggc gtggatgttg       480

tcgtcatccc tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca       540

tcaatgcggg catcgtcaag tcgcttatcg aggctgttgc agacaactgc cctgaggcct       600

tcatccatat tatcagcaac ccggtcaact                                        630
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<210> 180
<211> 671
<212> DNA
<213> Lolium perenne

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<220>
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<222>  (467)..(467)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (617)..(617)
<223>  n is a, c, g, or t

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caggccgctc  tggtgtcaaa  accaaggagt  catggcagca  cgagcttcag  tggcctgaag      120

gcatcatcat  cgtcgatcag  cttcgaatct  ggaacatcat  tcctgggcaa  gactgcctct    . 180

cttcgggcgt  cagtcacccc  gaggattgtg  ccaaaggcaa  agtctgggtc  tcagatatcg      240

cctcaggcat  cttacaaggt  ggcggtgctt  ggtgctgccg  gtggcatcgg  tcaaccactg      300

ggcctgctga  tcaagatgtc  gcctctggtc  tcggagctgc  gcctgtatga  tattgcgaat      360

gtcaagggcg  tcgctgccga  tctcagccac  tgcaacacgc  ctgctcaggt  catggacttc      420

actggccccg  cggaactagc  agagtgcttg  aaaggcgtgg  atgttgncgt  catccctgcg    . 480

ggtgtcccaa  ggaagccagg  catgacccgt  gatgaccttt  ttaacatcaa  tgcgggcatc      540

gtcaagtcgc  ttatcgaggc  tgttgcagac  aactgccctg  aggccttcat  ccatattatc      600

agcaacccgg  tcaactncac  ggtgccgatt  gctgcagaga  ttctgaaaca  gaagggcgtc      660

tacaacccca  a                                                              671


<210>  181
<211>  634
<212>  DNA
<213>  Lolium perenne

<400>  181
ttggtgctgc  tggtggcatc  ggtcaaccac  tgggcctgct  gatcaagatg  tctcctctcg       60

tctcggagct  gcgcctgtat  gatatcgcca  atgtcaaggg  agtcgctgca  gatctcagcc      120

actgcaacac  gcctgctcag  gccatggact  tcactggccc  cgcggaacta  gcagagtgct      180

tgaaaggtgt  ggatgttgtc  gtcatccctg  cgggtgtccc  aaggaagcct  ggcatgactc      240

gtgatgacct  ttttaacatc  aatgcgggca  tcgtcaagtc  gcttattgag  gctgttgcag      300

acaactgccc  agaggccttc  atccatatca  tcagcaaccc  ggtcaactcc  actgtgccga      360

ttgctgctga  gattctgaaa  cagaagggtg  tctacaaccc  caagaagctc  ttcggggttt      420

ccaccctgga  tgttgtcaga  gctaacacat  ttgtagctca  gaagaagaac  ctcagcctca      480

tcgatgttga  tgtcccagtt  gtcggtggcc  atgctgggat  cacgattctg  cctctgttgt      540

ccaagactag  gccttctgtc  agcttcacgg  acgaggaaac  tgaacagctg  acaaagagga      600

tacagaacgc  tgggacagag  gtggtggagg  cgaa                                   634


<210>  182
<211>  777
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<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (693)..(693)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (756)..(756)
<223>  n is a, c, g, or t

<400>  182
gatcagccct gcaacacgcc tgctcaggcc atggacttca ctggccccgc ggaactagca      60

gagtgcttga aaggtgtgga tgttgtcgtc atccctgcgg gtgtcccaag gaagcctggc     120

atgactcgtg atgacctttt taacatcaat gcgggcatcg tcaagtcgct tattgaggct     180

gttgcagaca actgcccaga ggccttcatc catatcatca gcaacccggt caactccact     240

gtgccgattg ctgctgagat tctgaaacag aagggtgtct acaaccccaa gaagctcttc     300

ggggtttcca ccctggatgt tgtcagagct aacacatttg tagctcagaa gaagaacctc     360

agcctcatcg atgttgatgt cccagttgtc ggtggccatg ctgggatcac gattctgcct     420

ctgttgtcca agactaggcc ttctgtcagc ttcacggacg aggaaactga acagctgaca     480

aagaggatac agaacgctgg gacagaggcg gtggaggcga aggctggtgc tggctctgct     540

actctgtcca tggcttatgc cgctgccaga tttgttgagt catcgctccg cgcaatggct     600

ggtgatccag atgtttacga gtgcacgtat gttcagtctg agttaacaga gcttccattc     660

ttcgcgtcca gagttaagct tgggaaggac ggngttgagt ccatcatttc ctccgacctg     720

gagggagtga cggagtacga ggccaaggcg cttgangcat tgaaggctga gctgaag       777
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<210>  183
<211>  414
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (9)..(10)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (14)..(14)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (23)..(23)
<223>  n is a, c, g, or t
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M80678527.ST25

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cgtttgatgt attagtgatg ccaaatctat atggcgacat tattagtgat ctatgtgctg   180

gtttgatcgg aggcttgggc ctaactccca gctgcaacat tggtgaaggt ggcatttgtc   240

ttgcagaggc tgtccatggc tctgcacctg atatatctgg caagaacctg gcaaacccaa   300

ctgctcttat gctgagtgct gttatgatgt tgcgccactt gcaattnaac gaccaagcan   360

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            20   25   30

Thr Leu Val Lys Asn Pro Gly Thr Phe Asp Val Leu Val Met Pro Asn
            35   40   45

Leu Tyr Gly Asp Ile Ile Ser Asp Leu Cys Ala Gly Leu Ile Gly Gly
    50   55   60

Leu Gly Leu Thr Pro Ser Cys Asn Ile Gly Glu Gly Gly Ile Cys Leu
65   70   75   80

Ala Glu Ala Val His Gly Ser Ala Pro Asp Ile Ser Gly Lys Asn Leu
                85   90   95

Ala Asn Pro Thr Ala Leu Met Leu Ser Ala Val Met Met Leu Arg His
            100   105   110

Leu Gln Xaa Asn Asp Gln Ala Xaa Arg Ile His Asn Ala Ile Leu Gln
        115   120   125

Thr Ile Xaa Glu Gly Lys Xaa Xaa Thr
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aatctacaac atgaaggcag tcgtagctgg agccgccggt ggcattggac agccattgtc     180
cctcctcctt aagacctgcc cgctcgtcac tgagctcgcc ctatacgatg tcgtcaacgc     240
cgtcggtgtc gcgactgacc tctcccacat ctcctcgccc gcgaaagtaa ccggctacct     300
gccggcaaat gacggtatgc agcaggctct cactggcgcc gacatcgtgg tcatccccgc     360
tggtattccc cgcaagcccg gcatgacccg tgacgacctc ttcaagatca acgccggcat     420
tgtccagggt ctcatcgagg gtgtcgccaa gcactgcccc aaggcatacg ttctcgtcat     480
ctccaacccc gtcaactcga ctgtgcccat cgccgccgag gtgctgaaga aggccggtgt     540
cttcgacccc aagaagctct tcggtgtcac caccctcgat gtcgtccgcg ccgagacctt     600
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Leu Leu Leu Pro Ile His Tyr Thr Ala Ser Ser Tyr Pro Ala Pro Ala
            20   25   30

Ile Gln Thr Thr Ser Pro Gln Ile Tyr Asn Met Lys Ala Val Val Ala
            35   40   45

Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Leu Leu Leu Lys Thr
    50   55   60

Cys Pro Leu Val Thr Glu Leu Ala Leu Tyr Asp Val Val Asn Ala Val
65   70   75   80

Gly Val Ala Thr Asp Leu Ser His Ile Ser Ser Pro Ala Lys Val Thr
                85   90   95

Gly Tyr Leu Pro Ala Asn Asp Gly Met Gln Gln Ala Leu Thr Gly Ala
            100   105   110

Asp Ile Val Val Ile Pro Ala Gly Ile Pro Arg Lys Pro Gly Met Thr
            115   120   125

Arg Asp Asp Leu Phe Lys Ile Asn Ala Gly Ile Val Gln Gly Leu Ile
    130   135   140

Glu Gly Val Ala Lys His Cys Pro Lys Ala Tyr Val Leu Val Ile Ser
145   150   155   160

Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Leu Lys Lys
                165   170   175

Ala Gly Val Phe Asp Pro Lys Lys Leu Phe Gly Val Thr Thr Leu Asp
            180   185   190

Val Val Arg Ala Glu Thr Phe Val Ala Glu Ile Thr Gly Glu Lys Asp
            195   200   205

Pro Ala Lys Leu Asn Xaa Pro Val
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taaggttgcg gagacgtttg gggttaagnt gactatgttt catggacgag ggggtactgt   180

tggaagaggt ggcggcccta cccatcttgc tatactgtca caacctccag atactgtcca   240

tggatcactt cgggtaactg ttcaaggtga agtcattgag cagtccttcg gagaggagca   300

tttgtgtttt agaacgcttc aacgttttac agctgctact cttgaacatg gtatgcatcc   360

accaatctca cctaaaccag aatggcgtgc tttgatggat gaaatggctg ttgttgccac   420

agaggaatac cgttccattg ttttccaaga accaagattt gttgagtatt ccgccttgc   480

aacaccagag ctcgagtatg gtaggatgaa tattggaagc aggccatcaa aacgtaagcc   540

aagcggagga atcgaatcat tgcgtgcaat tccttggata tttgcttgga cacagactag   600

attccacctg ccagtgtggc ttgnttttgg tgcggccttc aagcatgtcc tgcaaaagga   660

cattcgtant cttcaaatcc ttcagcagat gtacaacgag tggccgttta gggttaccat   720

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Gln His Ser Gly Lys Asp Ala Gly Arg Phe Ser Ala Gly Trp His Leu
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Tyr Lys Ala Gln Glu Glu Leu Ile Lys Val Ala Glu Thr Phe Gly Val
        35   40   45

Lys Xaa Thr Met Phe His Gly Arg Gly Gly Thr Val Gly Arg Gly Gly
    50   55   60

Gly Pro Thr His Leu Ala Ile Leu Ser Gln Pro Pro Asp Thr Val His
65   70   75   80

Gly Ser Leu Arg Val Thr Val Gln Gly Glu Val Ile Glu Gln Ser Phe
                85   90   95

Gly Glu Glu His Leu Cys Phe Arg Thr Leu Gln Arg Phe Thr Ala Ala
            100   105   110

Thr Leu Glu His Gly Met His Pro Pro Ile Ser Pro Lys Pro Glu Trp
        115   120   125

Arg Ala Leu Met Asp Glu Met Ala Val Val Ala Thr Glu Glu Tyr Arg
    130   135   140

Ser Ile Val Phe Gln Glu Pro Arg Phe Val Glu Tyr Phe Arg Leu Ala
145   150   155   160

Thr Pro Glu Leu Glu Tyr Gly Arg Met Asn Ile Gly Ser Arg Pro Ser
            165   170   175

Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile Pro Trp
            180   185   190

Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu Pro Val Trp Leu Xaa
        195   200   205

Phe Gly Ala Ala Phe Lys His Val Leu Gln Lys Asp Ile Arg Xaa Leu
210   215   220

Gln Ile Leu Gln Gln Met Tyr Asn Glu Trp Pro Phe Arg Val Thr Ile
                              Page 164

225   230   235   240

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ttggtgctta catcatctca atggcaactg ccccatctga tgtgcttgct gttgagcttt   120

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cagatcttga ancagctcca gcatctgttg cacgactatt ttcaatagac tggtacatga   240

atagaatcaa tggcaagcag gaggtcatga ttggatactc agactctggg aaggacgctg   300

ggcgtctctc tgcagcgtgg caaatgtata aagcacaaga agatctcata aaggtggcaa   360

agcaatatgg agtaaagtta acaatgtttc atggaagagg tggaacggtt ggcagaggag   420

gtggtcccag tcatcttgct atattatctc aaccaccaga cacgatacaa ggatcacttc   480

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gaactctgca acgtttcact gcagctactc ttgagcatgg aatgcatcct ccaatttcac   600

ccaagccaga atggcgtgct ataatggatg agatggctgt agtggcaaca aaagaatatc   660

gatcaattgt cttccaagaa ccacgttttg tcgaatactt ccgctcggca cacctgaga   720

ctgaatatgg tcggatgaat attggtagcc ggccatcaaa gagaaagcct agtggaggca   780

tagaatcgct ccgtgcaatt ccatggatct ttgcttggac acagacaagg tttcatcttc   840

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tccatactct gaaagaaatg tacaatgagt ggccattctt tagggtcacc cttgacttgc   960

ttgagatggt ttttgccaag ggagatccag gaattgctgc tttatatgac aaattgcttg  1020

tgtctgaaga tctgcagccc tttggggagc agctgagaaa caactttgaa gagacgaaac  1080

agttactcct tcaggttgct ggccacaagg acgttcttga aggggatcct tacctgaagc  1140

agcgtctgcg gttgcgtgag tcatacatca caacattgaa tgtttgccaa gccnacaccc  1200

tgaagcggat aagagaccct agcttcgagg tgacaccgca gcaggcacct ctgtcgaagg  1260

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ccccaggcct ggaggacacc ctcatcctta ccatgaaggg tatttgctgt ggaatgcaaa  1380

acacaggcta ggccagtttg cctatttgga ataactgtca tcccgtcaga tggggcgtga  1440

atatgtgtgt tccccaaatg ctagtgaacc ctggaggcat tttggccact tacatgcctt  1500

ttggttatgg atgnactttg atcttaatgn caagggttgt tgaagcctga tctaaataaa  1560

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M80678527.ST25

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Asp Val Leu Ala Val Glu Leu Leu Gln Arg Glu Cys His Ile Lys Lys
            35   40   45

Pro Leu Arg Val Val Pro Leu Phe Glu Lys Leu Ala Asp Leu Glu Xaa
    50   55   60

Ala Pro Ala Ser Val Ala Arg Leu Phe Ser Ile Asp Trp Tyr Met Asn
65   70   75   80

Arg Ile Asn Gly Lys Gln Glu Val Met Ile Gly Tyr Ser Asp Ser Gly
            85   90   95

Lys Asp Ala Gly Arg Leu Ser Ala Ala Trp Gln Met Tyr Lys Ala Gln
            100   105   110

Glu Asp Leu Ile Lys Val Ala Lys Gln Tyr Gly Val Lys Leu Thr Met
    115   120   125

Phe His Gly Arg Gly Gly Thr Val Gly Arg Gly Gly Gly Pro Ser His
    130   135   140

Leu Ala Ile Leu Ser Gln Pro Pro Asp Thr Ile Gln Gly Ser Leu Arg
145   150   155   160

Val Thr Val Gln Gly Glu Val Ile Glu His Ser Phe Gly Glu Glu His
            165   170   175

Leu Cys Phe Arg Thr Leu Gln Arg Phe Thr Ala Ala Thr Leu Glu His
            180   185   190

Gly Met His Pro Pro Ile Ser Pro Lys Pro Glu Trp Arg Ala Ile Met
    195   200   205

M80678527.ST25

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Asp Glu Met Ala Val Val Ala Thr Lys Glu Tyr Arg Ser Ile Val Phe
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Gln Glu Pro Arg Phe Val Glu Tyr Phe Arg Ser Ala Thr Pro Glu Thr
225             230             235             240

Glu Tyr Gly Arg Met Asn Ile Gly Ser Arg Pro Ser Lys Arg Lys Pro
                245             250             255

Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile Pro Trp Ile Phe Ala Trp
            260             265             270

Thr Gln Thr Arg Phe His Leu Pro Val Trp Leu Gly Phe Gly Ala Ala
        275             280             285

Phe Lys His Ile Met Gln Lys Asp Ile Arg Asn Ile His Thr Leu Lys
    290             295             300

Glu Met Tyr Asn Glu Trp Pro Phe Phe Arg Val Thr Leu Asp Leu Leu
305             310             315             320

Glu Met Val Phe Ala Lys Gly Asp Pro Gly Ile Ala Ala Leu Tyr Asp
            325             330             335

Lys Leu Leu Val Ser Glu Asp Leu Gln Pro Phe Gly Glu Gln Leu Arg
        340             345             350

Asn Asn Phe Glu Glu Thr Lys Gln Leu Leu Leu Gln Val Ala Gly His
        355             360             365

Lys Asp Val Leu Glu Gly Asp Pro Tyr Leu Lys Gln Arg Leu Arg Leu
    370             375             380

Arg Glu Ser Tyr Ile Thr Thr Leu Asn Val Cys Gln Ala Xaa Thr Leu
385             390             395             400

Lys Arg Ile Arg Asp Pro Ser Phe Glu Val Thr Pro Gln Gln Ala Pro
            405             410             415

Leu Ser Lys Glu Phe Ala Asp Glu Lys Glu Pro Ala Glu Leu Val Gln
            420             425             430

Leu Asn Arg Gly Ser Glu Tyr Ala Pro Gly Leu Glu Asp Thr Leu Ile
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Leu Thr Met Lys Gly Ile Cys Cys Gly Met Gln Asn Thr Gly
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tgcagcggga gtgccatata aaaaagccat tgagagttgt tccactattt gaaaagcttg     180

cagatcttga ancagctcca gcatctgttg cacgactatt ttcaatagac tggtacatga     240
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M80678527.ST25

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ggcgtctctc tgcagcgtgg caaatgtata aagcacaaga agatctcata aaggtggcaa    360

agcaatatgg agtaaagtta acaatgtttc atggaagagg tggaacggtt ggcagaggag    420

gtggtcccag tcatcttgct atattatctc aaccaccaga cacgatacaa ggatcacttc    480

gtgtaacagt tcaaggcgag gtcatagagc actcatttgg agaggaacac ttgtgcttca    540

naactctgca acgtttcact gcagctactc ttgagcatgg aatgcatcct ccaatttccc    600

ccaaaccaga atggcntgct ataatggatg anatggctgt agnggcacca aaagaaaatc    660

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atctcaacca ccagacacga tacaaggatc acttcgtgta acagttcaag gcgaggtcat    180

agagcactca tttggagggg aacacttgtg cttcagaact ctgcaacgtt tcactgcagc    240

tactcttgag catggaatgc atcctccaat ttcacccaag ccagaatggc gtgctataat    300

ggatgagatg gctgtagtgg caacaaaaga atatcgatca attgtcttcc aagaaccacg    360

ttttgtcgaa tacttccgct cggcaacacc tgagactgaa tatggtcgga tgaatattgg    420

tagccggcca tcaaagagaa agcctagtgg aggcatagaa tcgctccgtg caattccatg    480

gatctttgct tggacacaga caaggtttca tcttcctgta tggcttggat ttggtgcagc    540

gttcaaacat atcatgcaga aggacatcag gaatatccat actctgaaag aaatgtacaa    600

tgagtggcca ttctttaggg tcacccttga cttgcttgag atggtttttg ccaagggaga    660

tccaggaatt gctgctttat atgacaaatt gcttgtgtct gaagatctgc agccctttgg    720

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caagg                                                                785
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M80678527.ST25

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ttatctcaac cactagacac gatacaagga tcacttcgtg taacagttca aggcgaggtc     120
atagagcact catttggaga ggaacacttg tgcttcagaa ctctgcaacg tttcactgca     180
gctactcttg agcatggaat gcatcctcca atttcaccca agccagaatg gcgtgctata     240
atggatgaga tggctgtagt ggcaacaaaa gaatatcgat caattgtctt ccaagaacca     300
cgttttgtcg aatacttccg ctcggcaaca cctgagactg aatatggtcg gatgaatatt     360
ggtagccggc catcaaagag aaagcctagt ggaggcatag aatcgctccg tgcaattcca     420
tggatctttg cttggacaca gacgaggttt catcttcctg tatggcttgg atttggtgca     480
gcgttcaaac atatcatgca gaaggacatc aggaatatcc atactctgaa agaaatgtac     540
aatgagtggc cattctttag ggtcaccctt gacttgcttg agatggtttt tgccaaggga     600
gatccaggga ttgctgcttt atatgacaaa ttgcttgtgt ctgaagatct gcagcccttt     660
ggggagcagc tgagaaacaa ctttgaagag acgaaacagt tactccttca ggttgctggc     720
cacaaggacg ttcttgaagg ggatccttac ctgaagcagc gtctgcgggt gcgtgagtca     780
tac                                                                   783

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tgtgcttcag aactctgcaa cgtttcactg cagctactct tgagcatgga atgcatcctc     180
caatttcacc caagccagaa tggcgtgcta taatggatga gatggctgta gtggcaacaa     240
aagaatatcg atcaattgtc ttccaagaac cacgttttgt cgaatacttc cgctcggcaa     300
cacctgagac tgaatatggt cggatgaata ttggtagccg gccatcaaag agaaagccta     360
gtggaggcat agaatcgctc cgtgcaattc catggatctt tgcttggaca cagacaaggt     420
ttcatcttcc tgtatggctt ggatttggtg cagcgttcaa acatatcatg cagaaggaca     480
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tcaggaatat ccatactctg aaagaaatgt acaatgagtg gccattcttt agggtcaccc    540

ttgacttgct tgagatggtt tttgccgagg gagatccagg aattgctgct ttatatgaca    600

aattgcttgt gtctgaagat ctgcagccct ttggggagca gctgagaaac aactttgaag    660

agacgaaaca gttactcctt caggttgctg gccacaagga cgttcttgag ggggatcctt    720

acctgaagca gcgtctgcgg ttgcgtgagt catacatcac aaca                     764
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tctgcagccc tttggggagc ngctgagaaa caactttgaa gagacgaaac agttactcct    120
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M80678527.ST25

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gttgcgtgag tcatacatca caacattgaa tgtttgccaa gcctacaccc tgaagcggat    240

aagagaccct agcttcgagg tgacaccgca gcaggcacct ctgtcgaagg agttcgctga    300

tgagaaggag ccagctgagc tggtgcaact gaaccgtggg agcgagtacg ccccaggcct    360

ggaggacacc ctcatcctta ccatgaaggg tattgctgtg gaatgcaaaa cacaggctag    420

gccagtttgc ctattggaat aactgtcatt ccgtcagatg gggcgtgaat atgtgtgttc    480

cccaaatgct agtgaaccct ggaggcattt tggccactta catgcctttt ggttatgnat    540

gnacttgatc ttaatgncaa gggttgttga agcctgatct aaataaaata tggaacaatg    600

atattctggn ggatctaata atttgcttgg ctctggcatc gnaatagnga tttggagtng    660

tttaac                                                                666
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ggtgacaccg cagcaggcac ctctgtcgaa ggagttcgct gatgagaagg agccagctga    180

gctggtgcaa ctgaaccgtg ggagcgagta cgccccaggc ctggaggaca ccctcatcct    240

taccatgaag ggtatttgct gtggaatgca aaacacaggc taggccagtt tgcctatttg    300

gaataactgt catcccgtca gatgggcgtg aatatgtgtg ttccccaaat gctagtgaac    360

cctggaggca tttggccact tacatgcctt ttggttatgg atgnactttg atcttaatgt    420

caanggttgt tgaagcctga tctaaatnaa atatggaaca atgatattct ggttgtttct    480

ta                                                                   482
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M80678527.ST25

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gcacactgaa tatggtcggc atgaatattg gtagccggcc atcaaagaga aagcctagtg   120

gaggcataga atcgctccgt gcaattccat gcatctttgn ttggacacag acaaggnttn   180

atnttcctgt atgncttgna ttcgnctcca ccnccacccc cnta   224

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Gly Asn Thr Cys Thr Leu Asn Met Val Gly Met Asn Ile Gly Ser Arg
            20   25   30

Pro Ser Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile
            35   40   45

Pro Cys Ile Phe Xaa Trp Thr Gln Thr Arg Xaa Xaa Xaa Pro Val Xaa
        50   55   60

Leu Xaa Phe Xaa Ser Thr Xaa Thr Pro
65   70

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gacccagact accacgtcgc actgcggccc catctttcca aggaggttat ggacacaagc    180
aagccggctt ccgagcttgt gacgctgaac ccggccagcg agtacgcccc ggggctggag    240
gacaccctca tcttgaccat gaagggcgtt gctgccggtc tgcaaaacac cggttagggc    300
caggagagat gcctgatcac catctttttg tatcttcatg atgatgcgat gtttttcttt    360
agtcgtttgc ggtgggcctt atatctctcg gacgtagctg catctgtctc cctgctcagt    420
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M80678527.ST25
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gaggaataat ggcgtttcgc ccaagtatat tgataaataa agggaaccga tgttaatttc      480

agatttgttt gttagtaatt gttctattta ttttgcgaaa aaaaaaa                    527
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Val Xaa Gly Xaa Lys Asp Leu Leu Glu Gly Asp Pro Tyr Leu Lys Gln
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Arg Leu Arg Leu Arg Asp Ala Tyr Ile Thr Thr Met Asn Val Cys Gln
            20                  25                  30


Ala Tyr Thr Leu Lys Arg Ile Arg Asp Pro Asp Tyr His Val Ala Leu
        35                  40                  45


Arg Pro His Leu Ser Lys Glu Val Met Asp Thr Ser Lys Pro Ala Ser
    50                  55                  60


Glu Leu Val Thr Leu Asn Pro Ala Ser Glu Tyr Ala Pro Gly Leu Glu
65                  70                  75                  80


Asp Thr Leu Ile Leu Thr Met Lys Gly Val Ala Ala Gly Leu Gln Asn
                85                  90                  95


Thr Gly
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M80678527.ST25

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gcagatgaag tacatctgtc ctcaaaaaaa aaatctgcaa agcattacat agagttctgg     180

aagcaagttc ctccaaatga accttatcgt gtcatacttg gcgatgtcag ggataaactg     240

tactatacgc gcgaacgttc tcgccacata ttgacaactg gaatttcaga cattccagaa     300

gngtcaactt ttactaatgt tgaactgttt ctggaacctc ttgagctgtg ctacagatcc     360

ttatcttnct gtggngacaa anctattgct ganggaagcc ttcttgattt ctngcgnncn     420

gnatcnactt tgtgggctta ctctngcgaa                                     450
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M80678527.ST25

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Tyr Phe Ser Gln Ile Glu Asp Leu Met Phe Glu Leu Ser Met Trp Arg
            20                  25                  30


Cys Ser Asp Glu Leu Arg Val Arg Ala Asp Glu Val His Leu Ser Ser
            35                  40                  45


Lys Lys Lys Ser Ala Lys His Tyr Ile Glu Phe Trp Lys Gln Val Pro
    50                  55                  60


Pro Asn Glu Pro Tyr Arg Val Ile Leu Gly Asp Val Arg Asp Lys Leu
65                  70                  75                  80


Tyr Tyr Thr Arg Glu Arg Ser Arg His Ile Leu Thr Thr Gly Ile Ser
```
                              Page 179

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              85   90   95

Asp Ile Pro Glu Xaa Ser Thr Phe Thr Asn Val Glu Leu Phe Leu Glu
            100   105   110

Pro Leu Glu Leu Cys Tyr Arg Ser Leu Ser Xaa Cys Xaa Asp Lys Xaa
        115   120   125

Ile Ala Xaa Gly Ser Leu Leu Asp Phe Xaa Xaa Xaa Xaa Xaa Thr Leu
    130   135   140

Trp Ala Tyr Ser Xaa Glu
145   150

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gcttcaggac gctgcagcgt ttcacagctg ctactcttga gcatgggatg cgtccaccca   180

tttcaccaaa gccagagtgg cgagctcttc ttgatgagat ggctgtggtt gcaactgagg   240

aataccggtc aatcgtcttc caagaaccac gcttcgtcga gtatttccgc cttgcaacac   300

cagagacaga gtatggcagg atgaatatag gaagcaggcc atcaaagaga aaaccaagtg   360

gtggcattga atcactccgt gcaattccat ggatcttcgc atggacgcag acacggttcc   420

accttccagt ctggttgggc tttggtggtg cattcaagca tatcctcaag aaggacatca   480

gaaatttcca tatgctccag gagatgtaca acgagtggcc attttttcagg gtcacgatcg   540

atcttgttga gatggtgttc gccaagggta accctggcat tgctgccttg tatgacaggc   600

tcctggtttc agaggagcta cagccactgg gtgacaagct gagg   644

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Gly Gly Gly Pro Xaa His Leu Ala Xaa Leu Ser Xaa Pro Pro Xaa Thr
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Ile Asn Gly Ser Leu Arg Val Thr Val Gln Gly Glu Val Ile Glu Gln
            20                  25                  30


Ser Phe Gly Glu Glu His Leu Cys Phe Arg Thr Leu Gln Arg Phe Thr
            35                  40                  45


Ala Ala Thr Leu Glu His Gly Met Arg Pro Pro Ile Ser Pro Lys Pro
        50                  55                  60


Glu Trp Arg Ala Leu Leu Asp Glu Met Ala Val Val Ala Thr Glu Glu
65                  70                  75                  80


Tyr Arg Ser Ile Val Phe Gln Glu Pro Arg Phe Val Glu Tyr Phe Arg
                85                  90                  95


Leu Ala Thr Pro Glu Thr Glu Tyr Gly Arg Met Asn Ile Gly Ser Arg
            100                 105                 110


Pro Ser Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile
            115                 120                 125


Pro Trp Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu Pro Val Trp
        130                 135                 140


Leu Gly Phe Gly Gly Ala Phe Lys His Ile Leu Lys Lys Asp Ile Arg
145                 150                 155                 160
```

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```
Asn Phe His Met Leu Gln Glu Met Tyr Asn Glu Trp Pro Phe Phe Arg
                165                 170             175
```

```
Val Thr Ile Asp Leu Val Glu Met Val Phe Ala Lys Gly Asn Pro Gly
                180                 185             190
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Ile Ala Ala Leu Tyr Asp Arg Leu Leu Val Ser Glu Glu Leu Gln Pro
            195             200             205
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Leu Gly Asp Lys Leu Arg
        210
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cttgtcccta tgattgctag gggagtgatg ctcggccctg accagcctgt gatcctccac     180

atgcttgaca ttccacctgc agccgaatca ctcaacggtg ttaaaatgga gttggtggat     240

gctgcattcc ctcttcttaa aggagttgtt gctacaactg atgtggttga ggcatgcact     300

ggtgtcaata ttgccgttat ggttggtggg ttccctagaa aagaaggtat ggagaggaaa     360

gatgtgatga caaaaaatgt ctctatttac aagtctcagg cttctgccct tgaaaaacat     420

gctgctgcaa actgcaaggt tcttgttgtt gccaacccag caaacaccaa tgcattgatc     480

ttgaaggaat atgctccatc cattcctgag aaaaacattt ctgctttgac tagattggac     540

cataacaggg cactaggtca aatttctgaa agactaaacg ttgaagtttc tgatgtgaaa     600
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            35   40   45

Glu Ser Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe Pro
        50   55   60

Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys Thr
65   70   75   80

Gly Val Asn Ile Ala Val Met Val Gly Gly Phe Pro Arg Lys Glu Gly
                85   90   95

Met Glu Arg Lys Asp Val Met Thr Lys Asn Val Ser Ile Tyr Lys Ser
                100   105   110

Gln Ala Ser Ala Leu Glu Lys His Ala Ala Ala Asn Cys Lys Val Leu
            115   120   125

Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu Tyr
    130   135   140

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Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Ala Leu Thr Arg Leu Asp
145                 150             155                 160


His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Asn Val Glu Val
                165             170                 175


Ser Asp Val Lys Asn Val Ile Ile Trp Gly Lys Xaa Phe Ile Asn Ser
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Ile Pro Xaa Cys Xaa Pro Xaa Asn Arg
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cttgtcccta tgattgctag gggagtgatg ctcggncctg accannctgt gatcctncac     180

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tggccaaaga cccagttcgt gttcttgtca ctggtgctgc aggacaaatt gggtatgctc     120

tcgtccctat gattgctagg ggagtgatgc tcggccctga ccagcctgtg atcctccaca     180

tgcttgacat cccacctgca gccgaatcac tgaacggtgt aaaaatggag ttggtggatg     240

ctgcattccc tcttcttaaa ggagttgttg ctaccactga tgtggttgag gcatgcactg     300
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M80678527.ST25

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atgtgatgac aaaaaatgtc tctatttaca agtctcaggc ttctgccctt gaaaaacatg    420

ctgctgcaaa ctgcaaggtt cttgttgttg ccaacccagc aaacaccaat gcattgatct    480

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gtccctatga ttgctagggg agtgatgctc ggccctgacc agcctgtgat cctccacatg    180

cttgacattc cacctgcagc cgaatcactc aacggtgtta aaatggagtt ggtggatgct    240

gcattccctc ttcttaaagg agttgttgct acaactgatg tggttgaggc atgcactggt    300

gtcaatattg ccgttatggt tggtgggttc cctagaaaag aaggtatgga gaggaaagat    360

gtgatgacaa aaaatgtctc tatttacaag tctcaggctt ctgcccttga aaaacatgct    420

gctgcaaact gcaaggttct tgttgttgcc aacccagcaa acaccaatgc attgatcttg    480

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aacagggcac taggtcaaat ttctgaa                                        567
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gtccctatga ttgctagggg agtgatgctc ggccctgacc agcctgtgat cctccacatg    180

cttgacattc cacctgcagc cgaatcactg aacggtgtta aaatggagtt ggtggatgct    240

gcattccctc ttcttaaagg agttgttgct acaactgatg tggttgaggc atgcactggt    300

gtcaatattg ccgttatggt tggtgggttc cctagaaaag aaggtatgga gaggaaagat    360

gtgatgacaa aaaatgtctc tatttacaag tctcaggctt ctgcccttga aaaacatgct    420

gctgcaaact gcaaggttct tgttgttgcc aacccagcaa acaccaatgc attgatcttg    480

aaggaatatg ctccatccat tcctgagaaa aacatttctg ctttgactag attggaccat    540
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ccctatgatt gctaggggag tgatgctcgg ccctgaccag cctgtgatcc tccacatgct   180

tgacattcca cctgcagccg aatcactcaa cggtgttaaa atggagttgg tggatgctgc   240

attccctctt cttaaaggag ttgttgctac aactgatgtg gttgaggcat gcactggtgt   300

caatattgcc gttatggttg gtgggttccc tagaaaagaa ggtatggaga ggaaagatgt   360

gatgacaaaa aatgtctcta tttacaagtc tcaggcttct gcccttgaaa aacatgctgc   420

tgcaaactgc aaggttcttg ttgttgccaa cccagcaaac accaatgcat tgatcttgaa   480

ggaatatgct ccatccattc ctgagaaaaa catttctgct ttgactagat tggaccataa   540

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cctatgattg ctaggggagt gatgctcggc cctgaccagc ctgtgatcct ccacatgctt   . 180

gacattccac ctgcagccga atcactcaac ggtgttaaaa tggagttggt ggatgctgca   240

ttccctcttc ttaaaggagt tgttgctaca actgatgtgg ttgaggcatg cactggtgtn   300

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ctaggggagt gatgctcggc cctgaccagc ctgtgatcct ccacatgctt gacattccac   180

ctgcagccga atcactcaac ggtgttaaaa tggagttggt ggatgctgca ttccctcttc   240

ttaaaggagt tgttgctaca actgatgtgg ttgaggcatg cactggtgtc aatattgccg   300

ttatggttgg tgggttccct agaaaagaag gtatggagag gaaagatgtg atgacaaaaa   360

atgtctctat ttacaagtct caggcttctg cccttgaaaa acatgctgct gcaaactgca   420

aggttcttgt tgttgccaac ccagcaaaca ccaatgcatt gatcttgaag gaatatgctc   480

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tagggagtg atgctcggcc ctgaccagcc tgtgatcctc cacatgcttg acattccacc   180

tgcagccgaa tcactcaacg gtgttaaaat ggagttggtg gatgctgcat tccctcttct   240

taaaggagtt gttgctacaa ctgatgtggt tgaggcatgc actggtgtca atattgccgt   300

tatggttggt gggttcccta gaaaagaagg tatggagagg aaagatgtga tgacaaaaaa   360

tgtctctatt tacaagtctc aggcttctgc ccttgaaaaa catgctgctg caaactgcaa   420

ggttcttgtt gttgccaacc cagcaaacac caatgcattg atcttgaagg aatatgctcc   480

atccattcct gagaaaaaca tttctgcttt gactagattg gaccataaca gggcactagg   540

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ggagtgatgc tcggccctga ccagcctgtg atcctccaca tgcttgacat tccacctgca     180

gccgaatcac tcaacggtgt taaaatggag ttggtggatg ctgcattccc tcttcttaaa     240

ggagttgttg ctacaactga tgtggttgag gcatgcactg gtgtcaatat tgccgttatg     300

gttggtgggt tccctagaaa agaaggtatg gagaggaaag atgtgatgac aaaaaatgtc     360

tctatttaca agtctcaggc ttctgccctt gaaaaacatg ctgctgcaaa ctgcaaggtt     420

cttgttgttg ccaacccagc aaacaccaat gcattgatct tgaaggaata tgctccatcc     480

attcctgaga aaaacatttc tgctttgact agattggacc ataacagggc actaggtcaa     540

atttctgaaa gactaaacgt tgaagtttct gatgtgg    .                          577
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gggagtgatg ctcggccctg accagcctgt gatcctccac atgcttgaca ttccacctgc     180

agccgaatca ctcaacggtg ttaaaatgga gttggtggat ctgcattccc tcttcttaa     240

aggagttgtt gctacaactg atgtggttga ggcatgcact ggtgtcaata ttgccgttat     300

ggttggtggg ttccctagaa aagaaggtat ggagaggaaa gatgtgatga caaaaaatgt     360

ctctatttac aagtctcagg cttctgccct tgaaaaacat gctgctgcaa actgcaaggt     420

tcttgttgtt gccaacccag caaacaccaa tgcattgatc ttgaaggaat atgctccatc     480

cattcctgag aaaaacattt ctgctttgac tagattggac cataacaggg cactaggtca     540

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ggggagtgat gctcggccct gaccagcctg tgatcctcca catgcttgac attccacctg       180

cagccgaatc actcaacggt gttaaaatgg agttggtgga tgctgcattc cctcttctta       240

aaggagttgt tgctacaact gatgtggttg aggcatgcac tggtgtcaat attgccgtta       300

tggttggtgg gttccctana aaagaangta tggagaggaa agatgtgatg acaaaaatgt       360

ctctatttac aagtcttaag cttttgncct tgaaaaacat gctgctgcaa actgcaaggt       420

tcttgttgtt gncaacccac caaacaccaa tgcattgatc ttgaaggaat atgctccatn       480

cattcctgan aaaaacattt ntgctttgac tagattggac cataacaggg cactagggca       540

aatttntgaa anactaaacg ttgaagtttn tgatgtgaaa aatgttatat atggggggaaa      600

tnattcatca actcaatacc ctgntgtnaa ccacncaacc gttaaaatct cct             653
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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tcaaaaatgg ccaaagaccc agttcgtgtt ctcgtcactg gtgctgcagg gcaaattggt       180
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M80678527.ST25

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.cttcacatgc ttgatattcc tccagcagca gagtcattga atggagttaa gatggagttg    300

gtcgatgctg catttccact tcttaaaggt gttgttgcta caactgatgt tgttgaagca    360

tgcactggag tcaatattgc agtcatggtt ggtggattcc caagaaaaga aggtatggag    420

aggaaggatg tgatgtctaa gaacgtctct atttacaagt cccaggcttc tgcccttgaa    480

aagcatgctg ctgccaactg caaggttttg gttgttgcta acccagcaaa caccaatgca    540

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cttgatcaca acagggcatt gggccaaatt tctgaaagat tgaatgttca agtttctgat    660

gtaaagaatg tcattatctg gggtaatcat tcatcaactc agtatcctga tgtcaaccat    720

gcaactgtta acacccccgc tggggagaag cctgtccgtg agcttgtttc tgatgacgcc    780

tggttgaatg gagaattcat atctaccgtt caacaacgtg gtgctgcaat tattaaggct    840

agaaagcttt caagcgcact atccgctgct agcgctgctt gcgaccacat tcgcgattgg    900

gttcttggaa ctccccaggg caccttcgtt tcaatgggag tgtattctga tggttcttac    960

aacgtaccag ctggactcat ctattcattc cctgtcacca ctgctaatgg ggaatggaaa    1020

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<213>    Trifolium repens

<400>    219
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Pro Asp Gln Pro Val Ile Leu His Met Leu Asp Ile Pro Pro Ala Ala
            35                  40                  45

Glu Ser Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe Pro
        50                  55                  60

Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys Thr
65                  70                  75                  80

Gly Val Asn Ile Ala Val Met Val Gly Gly Phe Pro Arg Lys Glu Gly
                85                  90                  95

Met Glu Arg Lys Asp Val Met Ser Lys Asn Val Ser Ile Tyr Lys Ser
                100                 105                 110
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Gln Ala Ser Ala Leu Glu Lys His Ala Ala Ala Asn Cys Lys Val Leu
        115             120             125

Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu Phe
        130             135             140

Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Cys Leu Thr Arg Leu Asp
145             150             155             160

His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Asn Val Gln Val
            165             170             175

Ser Asp Val Lys Asn Val Ile Ile Trp Gly Asn His Ser Ser Thr Gln
            180             185             190

Tyr Pro Asp Val Asn His Ala Thr Val Asn Thr Pro Ala Gly Glu Lys
        195             200             205

Pro Val Arg Glu Leu Val Ser Asp Asp Ala Trp Leu Asn Gly Glu Phe
210             215                 220

Ile Ser Thr Val Gln Gln Arg Gly Ala Ala Ile Ile Lys Ala Arg Lys
225             230                 235             240

Leu Ser Ser Ala Leu Ser Ala Ala Ser Ala Ala Cys Asp His Ile Arg
            245             250             255

Asp Trp Val Leu Gly Thr Pro Gln Gly Thr Phe Val Ser Met Gly Val
        260             265             270

Tyr Ser Asp Gly Ser Tyr Asn Val Pro Ala Gly Leu Ile Tyr Ser Phe
        275             280             285

Pro Val Thr Thr Ala Asn Gly Glu Trp Lys Ile Val Gln Gly Leu Ser
    290             295             300

Ile Asp Glu Phe Ser Arg Lys Lys Leu Asp Leu Thr Ala Glu Glu Leu
305             310             315             320

Ser Glu Glu Lys Ser Leu Ala Tyr
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acccagttcg tgttctcgtc actggtgctg cagggcaaat tggttatgca cttgtcccta     180

tgattgctag gggagtgatg cttggtcctg atcaacctgt gatcctacac atgcttgata     240

ttccacccgc agcagagtca ttgaatggag ttaagatgga gatggncgat gctgnattnn     300

cacttgttaa aggngangct gct                                            323


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ccagttcgtg ttctcgtcac tggtgctgca gggcaaattg gttatgcact tgtccctatg     180

attgctaggg gagtgatgct tggtcctgat caacctgtga tcctacacat gcttgatatt     240

ccacccgcag cagagtcatt gaatggagtt aagatggagt tggtcgatgc tgcatttcca     300

cttgttaaag gtgntgatgn tacaactgat gatggngacg natnnnctgg                 350
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<212>  DNA
<213>  Trifolium repens
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tcttaatctt ccctgttcga ttccttctat ttcttcaaaa atggccaaag acccagttcg     120

tgttctcgtc actggtgctg caggccaaat tggttatgca cttgtcccta tgattgctag     180

gggagtgatg cttggtcctg atcaacctgt gatccttcac atgcttgata tccctccagc     240

agcagagtca ttgaatggag ttaaaatgga gttggtggat gctgcatttc cacttcttaa     300

aggtgttgtt gctacaactg atgttgttga agcatgcact ggagtcaata ttgcagtcat     360

ggttggtgga ttcccaagaa aagaaggtat ggagaggaag gatgtgatga ctaagaatgt     420

ctctatttac aagtcccagg cttctgccct tgaaaagcat gctgctgcca actgcaaggt     480

tttggttatt gctaacccag caaataccaa tgcattgatc ttgaaggagt ttgctccatc     540

tattccagag aaaaacattt cagctttgac tagacttgat cacaa                     585
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taatcttcgc ggttcgattc cttccgtttc ttcagcaatg gccaaagacc cagttcgtgt     120

cctcgttact ggtgctgcag gccaaattgg ttatgcactt gtccctatga ttgctagggg     180

agtgatgctt ggtcctgatc aacctgtgat ccttcacatg cttgatatcc ctccagcagc     240

agagtcattg aatggagtta aaatggagtt ggtggatgct gcatttccac ttcttaaagg     300

cgttgttgct acaactgatg ttgttgaagc atgcactgga gtcaatattg cagtcatggt     360
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M80678527.ST25

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tggtggattc ccaagaaaag aaggtatgga gaggaaggat gtgatgacta agaatgtctc      420

tatttacaag tcccaggctt ctgcccttga aaagcatgct gctgccaact gcaaggtttt      480

ggttattgct aacccagcaa ataccaatgc attgatcttg aaggagtttg ctccatctat      540

tccagagaaa aacatttcag ctttgactag acttgatcac aacagggcat tgg            593
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ttaatcttcc ctgtttgatt ccttccgttc ttcaaaaatg gccaaagacc cagttcgtgt       120

tctcgtcact ggtgctgcag ggcaaattgg ttatgcactt gtccctatga ttgctagggg       180

agtgatgctt ggtcctgatc aacctgtgat ccttcacatg cttgatattc ctccagcagc       240

agagtcattg aatggagtta agatggagtt ggtcgatgct gcatttccac ttcttaaagg       300

tgttgttgct acaactgatg ttgttgaggc atgcactgga gtcaatattg cagtcatggt       360

tggtggattc ccaagaaaag aaggtatgga gaggaaggat gtgatgtcta agaacgtctc       420

tatttacaag tcccaggctt ctgcccttga aaagcatgct gctgccaact gcaaggnttt       480

ggttgntgct aacccancaa caccaatgca ttgatcttgn aggaatcngc t               531
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<210>   225
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<212>   DNA
<213>   Trifolium repens
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cgcggttcga ttccttccgg gtcttcagca atggccaaag acccagttcg tgtcctcgtt       120

actggtgctg caggccaaat tggttatgca cttgtcccta tgattgctag gggagtgatg       180

cttggtcctg atcaacctgt gatccttcac atgcttgata tccctccagc agcagagnca       240

ttgaatggag ttaaaatgga gttggtggat gctgcatttc cacttcttaa aggcgttgtt       300

gctacaactg atgttgttga agcatgcact ggagtcaata ttgcagtcat ggttggtgga       360

ttcccaagaa aagaaggtat ggagaggaag gatgtgatga ctaagaatgt ctctatttac       420

aagtcccagg cttctgccct tgaaaagcat gctgctgcca actgcaaggt tttggttatt       480

gctaacccag caaataccaa tgcattgatc ttgaaggagt ttgctccatc tattccagag       540
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aaaaacattt cagctttgac tagacttgat cac                                      573
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<211>  603
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tcgcggttcg attccttccg tttcttcagc aatggccaaa gacccagttc gtgtcctcgt      120

tactggtgct gcaggccaaa ttggttatgc acttgtccct atgattgcta ggggagtgat      180

gcttggtcct gatcaacctg tgatccttca catgcttgat atccctccag cagcagagtc      240

attgaatgga gttaaaatgg agttggcgga tgctgcattt ccacttctta aaggcgttgt      300

tgctacaact gatgttgttg aagcatgcac tggagtcaat attgcagtca tggttggtgg      360

attcccaaga aaagaaggta tggagaggaa ggatgtgatg actaagaatg tctctattta      420

caagtcccag gcttcagccc ttgaaaagca tgctgctgcc aactgcaagg ttttggttat      480

tgctaaccca gcaaatacca atgcattgat cttgaaggag tttgctccat ctattccaga      540

gaaaaacatt tcagctttga ctagacttga tcacaacagg gcattgggcc aaatttctga      600

aag                                                                    603


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<212>  DNA
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M80678527.ST25

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cgcggttcga ttccttccgt ttcttcagca atggccaaag acccagttcg tgtcctcgtt      120

actggtgctg caggccaaat tggttatgca cttgtcccta tgattgctag gggagtgatg      180

cttggtcctg atcaacctgt gatccttcac atgcttgata tccctccagc agcagagtca      240

ttgaatggag ttaaaatgga gttggtggat gctgcatttc cacttcttaa aggcgttgtt      300

gctacaactg atgttgttga agcatgcact ggagtcaata ttgcagtcat ggttggtgga      360

ttcccaagaa aagaaggtat ggagaggaag gatgtgatga ctaagaatgt ctctatttac      420

aagtcccagg cttctgccct tgaaaagcat gctgctgcca actgcaaggt tttggttatt      480

gctaacccag caaataccaa tgcattgatc ttgaaggagt ttgctccatc tattccagag      540

aaaaacattt cagctttgac tagacttgat cacaacaggg cattgggcca aatttct        597
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<213>  Trifolium repens
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M80678527.ST25

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<223>  n is a, c, g, or t

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ccttctattt cttcaaaaat ggccaaagac ccagttcgtg ttctcgtcac tggtgctgca     120

ggccaaattg gttatgcact tgtccctatg attgctaggg gagtgatgct tggtcctgat     180

caacctgtga tccttgacat gcttgatatt gctgcagnag nagagtnatt gaatggagct     240

aaaatggagc tgccggatgc tgnattnnaa cttcttacag gcgccgccgc taccactgat     300

gctgcccaac catgccctgc acccatatnc cnn                                  333


<210>  229
<211>  567
<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

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tcgattcctt  ccacttcttc  aaaaatggcc  naagacccag  ttcgtgttct  cgtcactggt      120

gctgcngggc  aaattggtta  tgcacttgtc  cctatgattg  ctaggggagt  gatgcttggt      180

cctgatcaac  ctgtgatcct  acacatgctt  gatattccac  ccgcagcaga  gtcattgaat      240

ggagttaaga  tggagttggt  cgatgctgca  tttccacttc  ttaaaggtgt  tgttgctaca      300

actgatgttg  ttgaggcatg  cactggagtc  aatatcgcag  tcatggttgg  tggattccca      360

agaaaagaag  gtatgganag  gaaggatgtt  atgtctaaga  acgtctctat  ttacaagtcc      420

caagcttctg  cccttgaaaa  gcatgctgct  gccaactgca  aggttttggt  tgttgctaac      480

ccagcaaaca  ccaatgcatt  gatcttgaag  gaatttgctc  catctattcc  agagaaaaac      540

atttcttgtt  ngactagact  tgatcac                                            567


<210>  230
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<212>  DNA
<213>  Trifolium repens

<220>
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<223>  n is a, c, g, or t

<220>
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gtttgattcc  ttccagttct  tcaaaaatgg  ccaaagaccc  agttcgtgtt  ctcgtcactg      120

gtgctgcagg  gcaaattggt  tatgcacttg  tccctatgat  tgctagggga  gtgatgcttg      180

gtcctgatca  acctgtgatc  cttcacatgc  ttgatattcc  tccagcagca  gagtcattga      240

atggagttaa  gatggagttg  gtcgatgctg  catttccact  tcttaaaggt  gttgttgcta      300

caactgatgt  tgttgaggca  tgcactggag  tcaatattgc  agtcatggtt  ggtggattcc      360

caagaaaaga  aggtatggag  aggaaggatg  tgatgtctaa  gaacgtctct  atttacaagt      420

cccaggcttc  tgcccttgaa  aagcatgctg  ctgccaactg  caaggttttg  gttgttgcta      480
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M80678527.ST25
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acccagcaac accaatgcat tgatcttgaa ggaatttgct ccatctattc cagagaaaaa      540

catttcttgt ttgactagac ttgatcacc                                      569
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tgttcgattc cttccacttc ttcaaaaatg gccaagacc cagttcgtgt tctcgtcact       120

ggtgctgcag ggcaaattgg ttatgcactt gtccctatga ttgctagggg agtgatgctt      180

ggtcctgatc aacctgtgat cctacacatg cttgatattc cacccgcagc agagtcattg      240

aatggagtta agatggagtt ggtcgatgct gcatttccac ttcttaaagg tgttgttgct      300

acaactgatg ttgttgaggc atgcactgga gtcaatatcg cagtcatggt tggtggattc      360

ccaagaaaag aaggtatgga gaggaaggat gttatgtcta gaacgtctc tatttacaag       420

tcccaagctt ctgcccttga aaagcatgct gctgccaact gcaaggtttt ggttgttgct       480

aacccagcaa acaccaatgc attgatcttg aaggaatttg ctccatctat tccagagaaa      540

aacatttctt gtttgactag acttgatcac aacagggcat tgggccaaat tt              592


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<212>   DNA
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<223>   n is a, c, g, or t
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<222>  (22)..(22)
<223>  n is a, c, g, or t

<220>
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<222>  (26)..(26)
<223>  n is a, c, g, or t

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attccttccg tttcttcagc aatggccaaa gacccagttc gtttcctcgt tactggtgct     120

gcaggccaaa ttggttatgc acttgtccct atgattgcta ggggagtgat gcttggtcct     180

gatcaacctg tgatccttca catgcttgat atccctccag cagcagagtc attgaatgga     240

gttaaaatgg agttggtgga tgctgcattt ccacttctta aaggcgttgt tgctacaact     300

gatgttgttg aagcatgcac tggagtcaat attgcagtca tggttggtgg attcccaaga     360

aaagaaggta tggagaggaa ggatgtgatg actaagaatg tctctatttg caagtcccag     420

gcttctgccc ttgaaaagca tgctgctgcc aactgcaagg ttttggttat tgctaaccca     480

gcaaatacca atgcattgat cttgaaggag tttgctccat ctattccaga gaaaaacatt     540

tcagctttga ctagacttga tcacaacagg gcattgggcc aaatt                     585
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<213>  Trifolium repens
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t
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gccaaattgg ttatgcactt gtccctatga ttgctagggg agtgatgctt ggtcctgatc   180

aacctgtgat ccttcacatg cttgatattc ctccagcagc agagtcattg aatggagtta   240

aaatggagtt ggtggatgct gcatttccac ttcttaaagg tgttgttgct acaactgatg   300

ttgttgaagc atgcactgga gtcaatattg cagtcatggt tggtggattc ccaagaaaag   360

aaggtatgga gaggaaggat gtgatgacta anaatgtctc tatttacaag tcccaggctt   420

ctgcccttga aaagcatgct gctgccaact gcaaggtttt gg   462

<210> 234
<211> 573
<212> DNA
<213> Trifolium repens

<220>
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<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

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ttcgattcct tccacttctt caaaaatggc caaagaccca gttcgtgttc tcgtcactgg   120

tgctgcaggg caaattggtt atgcacttgt ccctatgatt gctaggggag tgatgcttgg   180

tcctgatcaa cctgtgatcc tacacatgct tgatattcca cccgcagcag agtcattgaa   240

tggagttaag atggagttgg tcgatgctgc atttccactt cttaaaggtg ttgttgctac   300

aactgatgtt gttgaggcat gcactggagt caatatcgca gtcatggttg gtggattccc   360

aagaaaagaa ggtatggaga ggaaggatgt tatgtctaag aacgtctcta tttacaagtc   420

ccaagcttct gcccttgaaa agcatgctgc tgccaactgc aaggtttttgg ttgttgctaa   480

cccagcaaac accaatgcat tgatcttgaa ggaatttgct ccatctattc cagagaaaaa   540

catttcttgt ttgactagac ttgatcacaa cag   573

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<213> Trifolium repens

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<223> n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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gctgcagggc aaattggtta tgcacttgtc cctatgattg ctaggggagt gatgcttggt     180

cctgatcaac ctgtgatcct acacatgctt gatattccac ccgcagcaga gtcattgaat     240

ggagttaaga tggagttggt cgatgctgca tttccacttc ttaaaggtgt tgttgctaca     300

actgatgttg ttgaggcatg cactggagtc aatatcgcag tcatggttgg tggattccca     360

agaaaagaag gtatggagag gaaggatgtt atgtctaaga cgtctctat ttacaagtcc      420

caagcttctg cccttgaaaa gcatgctgct gccaactgca aggttttggt tgttgctaac     480

ccagcaaaca ccaatgcatt gatcttgaag gaatttgctc catctattcc agagaaaaac     540

atttcttgtt tgactagact tgatcacaac agggcattgg gccaaatttc tgaaagattg     600

aat                                                                   603
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<212>  DNA
<213>  Trifolium repens
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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gattccttct atttcttcaa aaatggccaa agacccagtt cgtgttctcg tcactggtgc     120

tgcaggccaa attggttatg cacttgtccc tatgattgct aggggagtga tgcttggtcc     180

tgatcaacct gtgatccttc acatgcttga tattcctcca gcagcagagt cattgaatgg     240

agttaaaatg gagttggtgg atgctgcatt tccacttctt aaaggtgttg ttgctacaac     300

tgatgttgtt gaagcatgca ctggagtcaa tattgcagtc atggttggtg gattcccaag     360

aaaagaaggt atggagagga aggatgtgat gactaagaat gtctctattt acaagtccca .    420

ggcttctgcc cttgaaaagc atgctgctgc caactgcaag gntttgggta ttgctaaccc     480

ancaaatacc aatgcattga tcttgaagga gtttgctcca tctattccag anaaaaacat     540

ttcanctttg                                                            550


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<213>  Trifolium repens


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<223>  n is a, c, g, or t

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<221>  misc_feature
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<223>  n is a, c, g, or t

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<221>  misc_feature
<222>  (15)..(15)
<223>  n is a, c, g, or t

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attccttccg ttcttcaaaa atggccaaag acccagttcg tgttctcgtc actggtgctg     120

cagggcaaat tggttatgca cttgtcccta tgattgctag gggagtgatg cttggtcctg     180

atcaacctgt gatccttcac atgcttgata ttcctccagc agcagagtca ttgaatggag     240
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ttaagatgga gttggtcgat gctgcatttc cacttcttaa aggtgttgtt gctacaactg      300

atgttgttga ggcatgcact ggagtcaata ttgcagtcat ggttggtgga ttcccaagaa      360

aagaaggtat ggagaggaag gatgtgatgt ctaagaacgt ctctatttac aagtcccagg      420

cttctgccct tgaaaagcat gctgctgcca actgcaaggt tttggttgtt gctaacccag      480

caacaccaat gcattgatct tgaaggaatt tgctccatct attccagaga aaaacatttc      540

ttgtttgact agacttgatc acaacagggc attgggccaa atttctgaaa g              591
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<210>  238
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<223>  n is a, c, g, or t

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ttctatttct tcaaaaatgg ccaaagaccc agttcgtgtt ctcgtcactg gtgctgcagg     120

ccaaattggt tatgcacttg tccctatgat tgctagggga gtgatgcttg gtcctgatca     180

acctgtgatc cttcacatgc ttgatattcc tccagcagca gagtcattga atggagttaa     240

aatggagttg gtggatgctg catttccact tcttaaaggt gttgttgcta caactgatgt     300

tgttgaagca tgcactggag tcaatattgc agtcatggtt ggtggattcc caagaaaaga     360

aggtatggag aggaaggatg tgatgactaa gaatgtctct atttacaagt cccaggcttc     420

tgcccttgaa aagcatgctg ctgccaactg caaggttttg gttattgcta acccagcaaa     480

taccaatgca ttgatcttga aggagtttgc tccatctatt ccagagaaaa acatttcagc     540

tttgactaga cttgatcaca acagggcatt g                                   571
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<210>  239
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<212>  DNA
<213>  Trifolium repens


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tcttcaaaaa tggccaaaga cccagttcgt gttctcgtca ctggtgctgc aggccaaatt     120
ggttatgcac ttgtccctat gattgctagg ggagtgatgc ttggtcctga tcaacctgtg     180
atccttcaca tgcttgatat tcctccagca gcagagtcat tgaatggagt taaaatggag     240
ttggtggatg ctgcatttcc acttcttaaa ggtgttgttg ctacaactga tgttgttgaa     300
gcatgcactg gagtcaatat tgcagtcatg gttggtggat tcccaagaaa agaaggtntg     360
gagaggaagg atgtgatgac taagantgtc tctatttaca anannnagnc ttntgncctt     420
gaaaaagatn ctg                                                        433


<210>  240
<211>  585
<212>  DNA
<213>  Trifolium repens


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tcttcaaaaa tggccaaaga cccagttcgt gttctcgtca ctggtgctgc agggcaaatt     120

ggttatgcac ttgtccctat gattgctagg ggagtgatgc ttggtcctga tcaacctgtg     180

atccttcaca tgcttgatat tcctccagca gcagagtcat tgaatggagt taagatggag     240

ttggtcgatg ctgcatttcc acttcttaaa ggtgttgttg ctacaactga tgttgttgag     300

gcatgcactg gagtcaatat tgcagtcatg gttggtggat tcccaagaaa agaaggtatg     360

gagaggaagg atgtgatgtc taagaacgtc tctatttaca gtcccaggc  ttctgccctt     420

gaaaagcatg ctgctgccaa ctgcaaggtt ttggttgttg ctaacccagc aaacaccaat     480

gcattgatct tgaaggaatt tgctccatct attccagaga aaaacatttc ttgtttgact     540

agacttgatc acaacagggc attgggccaa atttctgaaa gattg                     585


<210>  241
<211>  610
<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

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caaaaatggc caaagaccca gttcgtgttc tcgtcactgg tgctgcaggc caaattggtt     120

atgcacttgt ccctatgatt gctaggggag tgatgcttgg tcctgatcaa cctgtgatcc     180

ttcacatgct tgatattcct ccagcagcag agtcattgaa tggagttaaa atggagttgg     240

tggatgctgc atttccactt cttaaaggtg ttgttgctac aactgatgtt gttgaagcat     300

gcactggagt caatattgca gtcatggttg gtggattccc aagaaaagaa ggtatggaga     360

ggaaggatgt gatgactaag aatgtctcta tttacaagtc ccaggcttct gcccttgaaa     420

agcatgctgc tgccaactgc aaggttttgg ttattgctaa cccagcaaat accaatgcat     480

tgatcttgaa ggagtttgct ccatctattc cagagaaaaa catttcagct ttgactagac     540

ttgatcacaa cagggcattg gccaaatttc tgaaagatt  gaatattcaa gtttctgatg     600

taaagaatgt                                                           610
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<210>  242
<211>  568
<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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ccaaagaccc agttcgtgtt ctcgtcactg gtgctgcagg gcaaattggt tatgcacttg     120

tccctatgat tgctagggga gtgatgcttg gtcctgatca acctgtgatc ctacacatgc     180

ttgatattcc acccgcagca gagtcattga atggagttaa gatggagttg gtcgatgctg     240

catttccact tcttaaaggt gttgttgcta caactgatgt tgttgaggca tgcactggag     300

tcaatatcgc agtcatggtt ggtggattcc caagaaaaga aggtatggag aggaaggatg     360

ttatgtctaa gaacgtctct atttacaagt cccaagcttc tgcccttgaa aagcatgctg     420

ctgccaactg caaggttttg gttgttgcta acccagcaaa caccaatgca ttgatcttga     480

aggaatttgc tccatctatt ccagagaaaa acatttcttg tttgactaga cttgatcaca     540

acagggcatt gggccaaatt tctgaaag                                        568


<210>  243
<211>  558
<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

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caaagaccca gttcgtgttc tcgtcactgg tgctgcaggg caaattggtt atgcacttgt     120

ccctatgatt gctaggggag tgatgcttgg tcctgatcaa cctgtgatcc tacacatgct     180

tgatattcca cccgcagcag agtcattgaa tggagttaag atggagttgg tcgatgctgc     240

atttccactt cttaaaggtg ttgttgctac aactgatgtt gttgaggcat gcactggagt     300

caatatcgca gtcatggttg gtggattccc aagaaaagaa ggtatggaga ggaaggatgt     360

tatgtctaag aacgtctcta tttacaagtc ccaagcttct gcccttgaaa agcatgctgc     420

tgccaactgc aaggttttgg ttgttgctaa cccagcaaac accaatgcat tgatcttgaa     480

ggaatttgct ccatctattc cagagaaaaa catttcttgt ttgactagac ttgatcacaa     540
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caggggcattg ggccaaat   558

<210> 244
<211> 752
<212> DNA
<213> Trifolium repens

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agacccagtt cgtgttctcg tcactggtgc tgcagggcaa attggttatg cacttgtccc   120

tatgattgct aggggagtga tgcttggtcc tgatcaacct gtgatccttc acatgcttga   180

tattcctaca gcagcagagt cattgaatgg agttaagatg gagttggtcg atgctgcatt   240

tccacttctt aaaggtgttg ttgctacaac tgatgttgtt gaggcatgca ctggagtcaa   300

tattgcagtc atggttggtg gattcccaag aaaagaaggt atggagagga aggatgtgat   360

gtctaagaac gtctctattt acaagtccca ggcttctgcc cttgaaaagc atgctgctgc   420

caactgcaag gttttggttg ttgctaaccc agcaaacacc aatgcattga tcttgaagga   480

atttgctcca tctattccag agaaaaacat ttcttgtttg actagacctg atcacaacag   540

ggcattgggc caaatttctg aaagattgaa tgttcaagtt tctgatgtaa agaatgtcat   600

tatctggggt aatcattcat caactcagta tcctgatgtc aaccatgcaa ctgttaacac ·   660

ccccgctggg gagaagcctg tccgtgagct tgtttctgat gacgcctggt tgaatggaga   720

attcatatct accgttcaac aacgtggtgc tg   752

<210> 245
<211> 583
<212> DNA
<213> Trifolium repens

<220>
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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (46)..(46)
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cccagttcgt gttctcgtca ctggtgctgc aggccaaatt ggttatacac ttgtccctat   120

gattgctagg ggagtgatgc ttggtcctga tcaacctgtg atccttcaca tgcttgatat   180

tcctccagca gcagagtcat tgaatggagt taaaatggag ttggtggatg ctgcatttcc   240

acttcttaaa ggtgttgttg ctacaactga tgttgttgaa gcatgcactg gagtcaatat   300

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tgcagtcatg gttggtggat tcccaagaaa agaaggtatg gagaggaagg atgtgatgac    360

taagaatgtc tctatttaca agtcccaggc ttctgccctt gaaaagcatg ctgctgccaa    420

ctgcaaggtt ttggttattg ctaacccagc aaataccaat gcattgatct tgaaggagtt    480

tgctccatct attccagaga aaaacatttc agctttgact agacttgatc acaacagggc    540

attgggccaa atttctgaaa gattgaatat tcaagtttct gat                      583
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<212>  DNA
<213>  Trifolium repens
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tcgtgttctc gtcactggtg ctgcagggca aattggttat gcacttgtcc ctatgattgc    120

taggggagtg atgcttggtc ctgatcaacc tgtgatcctt cacatgcttg atattcttcc    180

agcagcagag tcattgaatg gagttaagat ggagttggtc gatgctgcat ttccacttct    240

taaaggtgtt gttgctacaa ctgatgttgt tgaggcatgc actggagtca atattgcagt    300

catggttggt ggattcccaa gaaaagaagg tatggagagg aaggatgtga tgtctaagaa    360

cgtctctatt tacaagtccc aggcttctgc ccttgaaaag catgctgctg ccaactgcaa    420

ggttttggtt gttgctaacc cagcaaacac caatgcattg atcttgaagg aatttgctcc    480

atctattcca gagaaaaaca tttcttgttt gactagactt gatcacaaca gggcattggg    540

ccaaatttct gaaagattga atgttcaagt ttc                                 573
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<210>  247
<211>  562
<212>  DNA
<213>  Trifolium repens
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<223>  n is a, c, g, or t
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<223>  n is a, c, g, or t
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ggcattgttg ctacaactga tgttgttgaa gcatgcactg gagtcaatat tgcagtcatg    180
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gttggtggat tcccaagaaa agaaggtatg gagaggaagg atgtgatgac taagaatgtc    240

tctatttaca agtcccaggc ttctgccctt gaaaagcaag ctgctgccaa ctgcaaggtt    300

ttggttattg ctaacccagc aaataccaat gcattgatct tgaaggagtt tgctccatct    360

attccagaga aaaacatttc agctttgact agacttgatc acaacagggc attgggccaa    420

atttctgaaa gattgaatat tcaagtttct gatgtaaaga atgtcattat ctggggtaat    480

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ccacttctta aaggtgttgt tgctacaact gatgttgttg aggcatgcac tggagtcaat     120

attgcagtca tggttggtgg attcccaaga aaagaaggta tggagaggaa ggatgtgatg     180

tctaagaacg tctctattta caagtcccag gcttctgccc ttgaaaagca tgctgctgcc     240

aactgcaagg ttttggttgt tgctacccca gcaaacacca atgcattgat cttgaaggaa     300

tttgctccat ctattccaga gaaaaacatt tcttgtttga ctagacttga tcacaacagg      360

gcattgngcc aaatttctga agattgaat gtccaagttt ctgatgtaaa gaatgtcatt     420

atctggngta atcattcatc aactcagcat cctgatgtca accatgcaac tgttaacacc     480

cncgctgnng agaagcctgn ccgtgagctn gtttc                               515


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gcagtcatgg ttggtggatt cccaagaaaa gaaggtatgg agaggaagga tgtgatgtct     180

aagaacgtct ctatttacaa gtcccaggct tctgcccttg aaaagcatgc tgctgccaac     240

tgcaaggttt tggttgttgc taacccagca aacaccaatg cattgatctt gaaggaattt     300

gctccatcta ttccagagaa aaacatttct tgtttgacta gacttgatca acagggca       360

ttgggccaaa tttctgaaag attgaatgtc caagtttctg atgtaaagaa tgtcattatc     420

tggggtaatc attcatcaac tcagtatcct gatgtcaacc atgcaactgt taacacccc       480

gctggggaga gcctgtccg tgagcttgtt tctgatgacg cctggttgaa tggagaattc     540

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tgaaaagcat gctgctgcca actgcaaggt tttggttgtt gctaacccag caaacaccaa    120

tgcattgatc ttgaaggaat ttgctccatc tattccagag aaaaacattt cttgtttgac    180

tagacttgat cacaacaggg cattgggcca aatttctgaa agattgaatg ttcaagtttc    240

tgatgtaaag aatgtcatta tctggggtaa tcattcatca actcagtatc ctgatgtcaa    300

ccatgcaact gttaacaccc ccgctgggga gaagcctgtc cgtgagcttg tttctgatga    360

cgcctggttg aatggagaat tcatatctac cgttcaacaa cgtggtgctg caattattaa    420

ggctagaaag ctttcaagcg cactatccgc tgctagcgct gcttgcgacc acattcgcga    480

ttgggttctt ggaactcccc agggcacctt cgtttcaatg ggagtgtatt ctgatggttc    540

ttacaacgta ccagctggac tcatctattc attccctgtc accactgcta atggggaatg .   600

gaa      .              .             .                    603
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tgcattgatc ttgaaggaat ttgctccatc tattccagag aaaaacattt cttgtttgac    180

tagacttgat cacaacaggg cattgggcca aatttctgaa agattgaatg ttcaagtttc    240

tgatgtaaag aatgtcatta tctggggtaa tcattcatca actcagtatc ctgatgtcaa    300

ccatgcaact gttaacaccc ccgctgggga gaagcctgtc cgtgagcttg tttctgatga    360

cgcctggttg aatggagaat tcatatctac cgttcaacaa cgtggtgctg caattattaa    420
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ggctagaaag ctttcaagcg cactatccgc tgctagcgct gcttgcgacc acattcgcga        480

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ttacaacgta ccagctggac tcatctattc attccctgtc accactgcta atggggaatg        600

gaaaattgtt caaggacttt caattgacga gttctcaagg aagaagttgg acttgacagc        660

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ccgtcgatgc tcagatccgt ccaatcagcc gtctcccgcg cctcttctca cctaacccgc     180
cgtggctatg ctaccgaacc agttccagaa cgcaaggtgg ccattctcgg cgctgccggc     240
gggatcggcc agcctctctc tcttctcatg aagctcaacc ctctcgtttc aaccctatct     300
ctttatgata ttgctggaac ccctggtgtc gccgctgatg tcagccacat caactccaga     360
tctgaggtaa ctgggtatgc aggtgaagaa gagcttggaa aagctttgga gggtgctgat     420
gttgttataa ttcctgctgg tgtgcccaga aagcctggaa tgactcgtga tgatcttttc     480
aatattaacg ctggcattgt caagtcactt gccactgcta tttctaagta ctgcccccat     540
gcccttgtta acatgataag caaccctgtg aactccaccg ttcccattgc tgcagaggtt     600
ttcaagaagg cagggacata tgacgagaag agattgtttg gggttacaac ccttgatgta     660
gtcagggcaa aaactttcta tgccgggaaa gctaaagttc cagttgccga ggtcaatgta     720
cctgttatag gaggccatgc aggagttact attcttccat tattttntca ggcaacacct     780
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acagaagttg ngaccgccaa ggctggaaag ggttctgcaa ctttgtcaat ggcttatgct     900
ggagccatat ttgctgatgc tngcctcaaa ggnctgaatg gagttccaga tgttattgag     960
tgctcatatg tgcaatccaa tatcatctct gaccttcctt tctttgcttc caaggtgagg    1020
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caaggccttg aaaacctcaa ggctgaactc aaatcatcta ttgaaaaggg aatcaaattt    1140
gcctcccagt aatcgaacat gtcatacatt actggatttt tccatttaga accagatcaa    1200
attttgcaaa ttcagaacaa ttgtttgtaa tgttgccggt aggtataccc ctagatttaa    1260
taagtaaatc tgcgagagca gtttattgct gcagggactg aaattaaaac cagttttagg    1320
ttggcctttc cattcgtaat ggcccttcat tgttgcatgn tttcatataa tgcaattgaa    1380
gggtgntggn cancgataca canccccc                                       1408
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<213>   Trifolium repens


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Arg Lys Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu
            35                  40                  45


Ser Leu Leu Met Lys Leu Asn Pro Leu Val Ser Thr Leu Ser Leu Tyr
    50                  55                  60


Asp Ile Ala Gly Thr Pro Gly Val Ala Ala Asp Val Ser His Ile Asn
65                  70                  75                  80


Ser Arg Ser Glu Val Thr Gly Tyr Ala Gly Glu Glu Glu Leu Gly Lys
                85                  90                  95


Ala Leu Glu Gly Ala Asp Val Val Ile Ile Pro Ala Gly Val Pro Arg
            100                 105                 110


Lys Pro Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile
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                             Page 220

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              115                      120                      125
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Val Lys Ser Leu Ala Thr Ala Ile Ser Lys Tyr Cys Pro His Ala Leu
    130   135   140

Val Asn Met Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala
145   150   155   160

Glu Val Phe Lys Lys Ala Gly Thr Tyr Asp Glu Lys Arg Leu Phe Gly
                165   170   175

Val Thr Thr Leu Asp Val Val Arg Ala Lys Thr Phe Tyr Ala Gly Lys
            180   185   190

Ala Lys Val Pro Val Ala Glu Val Asn Val Pro Val Ile Gly Gly His
        195   200   205

Ala Gly Val Thr Ile Leu Pro Leu Phe Xaa Gln Ala Thr Pro Gln Ala
    210   215   220

Asn Leu Gly Asp Asp Thr Leu Lys Xaa Leu Thr Xaa Xaa Thr Gln Asp
225   230   235   240

Gly Gly Thr Glu Val Xaa Thr Ala Lys Ala Gly Lys Gly Ser Ala Thr
                245   250   255

Leu Ser Met Ala Tyr Ala Gly Ala Ile Phe Ala Asp Ala Xaa Leu Lys
            260   265   270

Xaa Leu Asn Gly Val Pro Asp Val Ile Glu Cys Ser Tyr Val Gln Ser
        275   280   285

Asn Ile Ile Ser Asp Leu Pro Phe Phe Ala Ser Lys Val Arg Ile Gly
    290   295   300

Lys Asn Gly Val Glu Glu Ile Leu Gly Leu Gly Ser Leu Thr Asp Phe
305   310   315   320

Glu Gln Gln Gly Leu Glu Asn Leu Lys Ala Glu Leu Lys Ser Ser Ile
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Glu Lys Gly Ile Lys Phe Ala Ser Gln
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cgatgctcag atccgtccaa tcagccgtat cccgcgcctc ctctcaccta acccgccgtg   180
gctatgctac cgaaccagtt ccagaacgca aggtggccat tctcggtgct gccggcggga   240
tcggacagcc tctctctctt ctcatgaagc tcaaccctct cgtttcaacc ctatctcttt   300
atgatattgc tggaacccct ggtgtcgccg ctgatgtcag ccacatcaac tccagatctg   360
aggtaactgg gtatgcaggt gaagaagagc ttggaaaagc tttggagggt gctgatgttg   420
ttataattcc tgctggtgtg cccagaaagc ctggaatgac tcgtgatgat cttttcaata   480
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tgctcagatc cgtccaatca gccgtatccc gcgcctcctc tcacctaacc cgccgtggct   180
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taactgggta tgcaggtgaa gaagagcttg gaaaagcttt ggagggtgct gatgttgtta   420
taattcctgc tggtgtgccc agaaagcctg gaatgactcg tgatgatctt ttcaatatta   480
acgctggcat tgtcaagtca cttgccactg ctatttctaa gtactgcccc catgcccttg   540
ttaacatgat aagcaaccct gtgaactcca ccgttcccat tgctgcagag gttttcaaga   600

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aggcaggg   608

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caatcagccg tctcccgcgc ctcttctcac ctaacccgcc gtggctatgc taccgaacca     180

gttccagaac gcaaggtggc cattctcggc gctgccggcg ggatcggcca gcctctctct     240

cttctcatga agctcaaccc tctcgtttca accctatctc tttatgatat tgctggaacc     300

cctggtgtcg ccgctgatgt cagccacatc aactccagat ctgaggtaac tgggtatgca     360

ggtgaagaag agcttggaaa agctttggag ggtgctgatg ttgttataat tcctgccggt     420

gtgcccagaa agcctggaat gactcgtgat gatctttta atattaatgc tggcattgtc      480

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ccgcgcctcc  tctcacctaa  cccgccgtgg  ctatgctacc  gaaccagttc  cagaacgcaa      180

ggtggccatt  ctcggtgctg  ccggcgggat  cggacagcct  ctctctcttc  tcatgaagct      240

caaccctctc  gtttcaaccc  tatctcttta  tgatattgct  ggaacccctg  gtgtcgccgc      300

tgatgtcagc  cacatcaact  ccagatctga  ggtaactggg  tatgcaggtg  aagaagagct      360

tggaaaagct  ttggagggtg  ctgatgttgt  tataattcct  gctggtgtgc  ccagaaagcc      420

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cgcctcttct  cacctaaccc  gccgtggcta  tgctaccgaa  ccagttccag  aacgcaaggt      180

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ccctctcgtt  tcaaccctat  ctctttatga  tattgctgga  acccctggtg  tcgccgctga      300

tgtcagccac  atcaactcca  gatctgaggt  aactgggtat  gcaggtgaag  aagagcttgg      360

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aatgactcgt  gatgatcttt  tcaatattaa  cgctggcatt  gtcaagtcac  ttgccactgc      480

tatttctaag  tactgccccc  atgcccttgt  taacatgata  agcaaccctg  tgaactccac      540

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<223>  n is a, c, g, or t

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acaacggaga gaattatgag gccgtcgatg ttcagatccg tccaatcagc cgtctcccgc     120

gcctcttctc acctaacccg ccgtggctat gctaccgaac cagttccaga acgcaaggtg     180

gccattctcg gcgctgccgg cgggatcggc cagcctctct ctcttctcat gaagctcaac     240

cctctcgttt caaccctatc tctttatgat attgctggaa cccctggtgt cgccgctgat     300

gtcagccaca tcaactccag atctgaggta actgggtatg caggtgaaga agagcttgga     360

aaagctttgg agggtgctga tgttgttata attcctgccg gtgtgcccag aaagcctgga     420

atgactcgtg atgatctttt caatattaac gctggcattg tcaagtcact tgccactgct     480

atttctaagt actgcccccca tgcccttgtt aacatgataa gcaaccctgt gaactccacc     540

gttcccattg ctgcagaggt tttcaagaag gcagggacat atgacgagaa gagattgt       598


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<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

<220>
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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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ccaacaacgg agagaattat gaggccgtcg atgttcagat ccgtccaatc agccgtctcc    120

cgcgcctctt ctcacctaac ccgccgtggc tatgctaccg aaccagttcc agaacgcaag    180

gtggccattc tcggcgctgc cggcgggatc ggccagcctc tctctcttct catgaagctc    240

aaccctctcg tttcaaccct atctctttat gatattgctg gaacccctgg tgtcgccgct    300

gatgtcagcc acatcaactc cagatctgag gtaactgggt atgcaggtga agaagagctt    360

ggaaaagctt tggagggtgc tgatgttgtt ataattcctg ccggtgtgcc cagaaagcct    420
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ggaatgactc gtgatgatct tttcaatatt aacgctggca ttgtcaagtc acttgccact    480

gctatttcta agtactgccc ccatgccctt gttaacatga taagcaaccc tgtgaactcc    540

accgttccca ttgctgcaga ggttttcaag aaggcaggga catatgacga gaagagattg    600

tttggggtta caacccttga tgtagtcagg gcgaaaactt tttatgccgg gaaagctaaa    660

gttccagttg ccgaggtcaa tgtacctgtt tttggaggcc atgcaggagt tactattntt    720

ccattatttt ntaaggaaca cctnaagcca atntggntga tgaaaccctt naggntttaa    780

cggnangggc ncaagatggg ggaacngaat tgngaccgcc aagggtt                  827
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<212>   DNA
<213>   Trifolium repens


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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

<400>   261
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gcgcctcctc tcacctaacc cgccgtggct atgctaccga accagttcca gaacgcaggg    180

tggccattct cggtgctgct ggcgggatcg gacagcctct ctctcttctc atgaagctca    240

accctctcgt ttcaacccta tctctttatg atattgctgg aacccctggt gtcgccgctg    300

atgtcagcca catcaactcc agatctgagg taactgggta tgcaggtgaa gaagagcttg    360

gaaaagcttt ggagggtgct gatgttgtta taattcctgc tggtgtgccc agaaagcctg    420

gaatgactcg tgatgatctt ttcaatatta acgctggcat tgtcaagtca cttgccactg    480

ctatttctaa gtactgcccc catgcccttg ttaacatgat aagcaaccct gtgaactcca    540

ccgttcccat tgctgc                                                     556
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<210>   262
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<213>   Trifolium repens


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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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tcaacggaga gaattatgag gccgtcgatg ttcagatccg tccaatcagc cgtctcccgc   120

gcctcttctc acctaacccg ccgtggctat gctaccgaac cagttccaga acgcaaggtg   180

gccattctcg gcgctgccgg cgggatcggc cagcctctct ctcttctcat gaagctcaac   240

cctctcgttt caaccctatc tctttatgat attgctggaa cccctggtgt cgccgctgat   300

gtcagccaca tcaactccag atctgaggta actgggtatg caggtgaaga agagcttgga   360

aaagctttgg agggtgctga tgttgttata attcctgccg gtgtgcccag aaagcctgga   420

atgactcgtg atgatctttt caatattaac gctggcattg ttaagtcact tgccactgct   480

atttctaagt actgccccca tgcccttgtt aacatgataa gcaaccctgt gaactccacc   540

gttcccattg ctgcagaggt tttcaagaag gcagggacat atgacgagaa gagattgttt   600

ggggttacaa cccttgatgt agtcagggcg aaaactttct atgccgggaa agctaaagtt   660

ccagttgccg aggtcaatgt ac                                            682


<210> 263
<211> 801
<212> DNA
<213> Trifolium repens


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<222> (178)..(178)
<223> n is a, c, g, or t

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<222> (553)..(553)
<223> n is a, c, g, or t

<220>
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<222> (572)..(572)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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caacggagag aattatgagg ccgtcgatgt tcagatccgt ccaatcagcc gtctcccgcg   120

cctcttctca cctaacccgc cgtggctatg ctaccgaacc agttccagaa cgcaaggngg   180

ccattctcgg cgctgccggc gggatcggcc agcctctctc tcttctcatg aagctcaacc   240

ctctcgtttc aaccctatct ctttatgata ttgctggaac ccctggtgtc gccgctgatg   300

tcagccacat caactccaga tctgaggtaa ctgggtatgc aggtgaagaa gagcttggaa   360

aagctttgga gggtgctgat gttgttataa ttcctgccgg tgtgcccaga aagcctggaa   420

tgactcgtga tgatcttttc aatattaacg ctggcattgt caagtcactt gccactggta   480

tttctaagta ctgcccccat gcccttgtta acatgataag caaccctgtg aactccaccg   540

ttcccattgc tgnagaggtt ttcaagaagg cngggacata tgacnagaan aaattgtttg   600

gggttcaacc cttgatgtag tcaggggaa aacttttttt gccgggaaag ctaaagttcc   660

agttgccgng ggnaatgnnc ctgttnttgg aggcctgcng agtnctattn tcccttttttt   720

ttttaggcan ncctnancca nttnggngat naaaccttaa gggtttacgg gnnggcncaa   780

aangggaac aaaanttnga c   801

<210>   264
<211>   577
<212>   DNA
<213>   Trifolium repens

<220>
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<220>
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<222> (19)..(19)
<223> n is a, c, g, or t

<400> 264
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gtccaatcag ccgtctcccg cgcctcttct cacctaaccc gccgtggcta tgctaccgaa   120

ccagttccag aacgcaaggt ggccattctc ggcgctgccg cgggatcgg ccagcctctc   180

tctcttctca tgaagctcaa ccctctcgtt tcaaccctat ctctttatga tattgctgga   240

accccctggtg tcgccgctga tgtcagccac atcaactcca gatctgaggt aactgggtat   300

gcaggtgaag aagagcttgg aaaagctttg gagggtgctg atgttgttat aattcctgcc   360

ggtgtgccca gaaagcctgg aatgactcgt gatgatcttt tcaatattaa cgctggcatt   420

gtcaagtcac ttgccactgc tatttctaag tactgccccc atgcccttgt aacatgata   480

agcaaccctg tgaactccac cgttcccatt gctgcagagg ttttcaagaa ggcagggaca   540

tatgacgaga agagattgtt tggggttaca acccttg   577

<210> 265
<211> 594
<212> DNA
<213> Trifolium repens

<400> 265
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ccatcagccg tatcccgcgc ctcctctcac ctaacccgcc gtgggtatgc taccgaacca   120

gttccagaac gcaaggtggc cattctcggc gctgctggcg ggatcggcca gcctctctct   180

cttctcatga agctcaatcc tctcgtttca accctatctc tttatgatat tgctggaacc   240

cctggtgtcg ccgctgatgt cagccacatc aactccagat ctgaggtaac tgggtatgca   300

ggtgaagaag agcttggaaa agctttggag ggtgctgatg ttgttataat tcctgctggt   360

gtgcccagaa agcctggaat gactcgtgat gatcttttca atattaacgc tggcattgtc   420

aagtcacttg ccactgctat ttctaagtac tgcccccatg cccttgttaa catgataagc   480

aaccctgtga actccaccgt tcccattgct gcagaggttt tcaagaaggc agggacatat   540

gacgagaaga gattgtttgg ggttacaacc cttgatgtag tcagggcaaa aact   594

<210> 266
<211> 811
<212> DNA
<213> Trifolium repens

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<223> n is a, c, g, or t

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<222> (30)..(30)

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<223> n is a, c, g, or t

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<222> (140)..(140)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<222> (720)..(720)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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gtccaatcag ccgtatcccg ggcctcctct cacctaaccc gccgtgggta tgctaccgaa    120

ccagttccag aacgcaaggn ggccattctc ggtgctgccg gcgggatcgg acagcctctc    180

tctcttctca tgaagctcaa ccctctcgtt tcaaccctat ctctttatga tattgctgga    240
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acccctggtg tcgccgctga tgtcagccac atcaactcca gatctgaggt aactgggtat    300

gcaggtgaag aagagcttgg aaaagctttg gagggtgctg atgttgttat aattcctgct    360

ggtgtgccca gaaagcctgg aatgactcgt gatgatcttt tcaatattaa cgctggcatt    420

gtcaagtcac ttgccactgc tatttctaag tactgccccc atgcccttgt taacatgata    480

agcaaccctg tgaactccac cgttcccatt gctgcanagg ttttcaagaa ggcagggaca    540

tatgacnaga agagattgtt tggggttaca acccttgatg tagncagggc aaaaactttt    600

tatgctggga aagctaaagt tccagttgcc gaggncaatg gacctgttat aggaggccat    660

gcaggagtta ctattctncc attatttttnt naggcaacac ctnaagccaa tntgggtgan    720

gatnccctta aggntttaac ggnanggacc caananggag gaacanaant tnngacccccc   780

anggtggaag ggttntnnac tttnnaatgg n                                   811
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<210> 267
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<212> DNA
<213> Trifolium repens

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<223> n is a, c, g, or t

<220>
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<222> (15)..(16)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<222> (38)..(38)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

<400> 267
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gaagaagagc ttggaaaagc tttggagggt gctgatgttg ttataattcc tgctggtgtg    120

cccagaaagc ctggaatgac tcgtgatgat cttttcaata ttaacgctgg cattgtcaag    180
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M80678527.ST25

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tcacttgcca ctgctatttc taagtactgc ccccatgccc ttgttaacat gataagcaac    240

cctgtgaact ccaccgttcc cattgctgca gaggttttca agaaggcagg gacatatgac    300

gagaagagat tgtttggggt tacaaccctt gatgtagtca gggcaaaaac tttctatgct    360

gggaaagcta aagttccagt tgccgaggtc aatgtacctg ttataggagg ccatgcagga    420

gttactattc tcccattatt ttctcaggca acacctcaag ccaatctgga tgatgatacc    480

attaaggctc taacggcaag gacacaagat ggaggaacag aagttgtgac cgccaaggct    540

ggaaagggtt ctgcaacttt gtcaatggct tatgctggag ccatatttgc tgatgcttgc    600

ctcaaaggtc tgaatggagt tccagatgtt attgagtgct catatgtgca atccaatatc    660

atctctgacc ttnctttctt tgcttccaag gtgaggattg ggaanaatgg tgtgggaana    720

at                                                                   722
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<210>  268
<211>  557
<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

<400>  268
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gaaaagcttt ggagggtgct gatgttgtta taattcctgc tggtgtgccc agaaagcctg    120

gaatgactcg tgatgatctt ttcaatatta acgctggcat tgtcaagtca cttgccactg    180

ctatttctaa gtactgcccc catgcccttg ttaacatgat aagcaaccct gtgaactcca    240

ccgttcccat tgctgcagag gttttcaaga aggcagggac atatgacgag aagagattgt    300

ttggggttac aacccttgat gtagtcaggg caaaaacttt ctatgctggg aaagctaaag    360

ttccagttgc cgaggtcaat gtacctgtta taggaggcca tgcaggagtt actattctcc    420

cattattttc tcaggcaaca cctcaagcca atctggatga tgataccatt aaggctctaa    480

cggcaaggac acaagatgga ggaacagaag ttgtgaccgc caaggctgga aagggttctg    540

caactttgtc aatggct                                                   557
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<212>  DNA
<213>  Trifolium repens


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ggtgtggaag agattctg                                                   138


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<223>  n is a, c, g, or t

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tttgcttcca ggtgaggatt gggaagaatg gtgtggaaga aattctgggc ttaggttctc       120

tcacagattt cgagcaacaa ggccttgaaa acctcaaggc tgaactcaaa tcatctattg       180

aaaagggaat caaatttgcc tcccagtaat cgaacatgtc atacattact ggatttttcc       240

atttagaacc agatcaaatt ttgcaaattc agaacaattg tttgtaatgt tgccggtagg       300

tataccccta gatttaataa gtaaatctgc gagagcagtt tattgctgca gggactgaaa       360

ttaaaaccag ttttaggttg gcctttccat tcgtaatggc ccttcattgt tgcatgnttt       420

catataatgc aattgaaggg tgntggncan cgatacacan ccccc                       465

<210>  271
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cccattacca ttcattccca gaggtcgaga tggcagcatc agcagcagct acttttacta   120

ttggaactgc ccaaacaggg aggccacttc ctcaatcaaa cccttttggt ttgaaagtca   180

attcccaggt taattttaag accttctctg gtctcaaggc catgtcatct ctaagatgcg   240

agtctgaatc atctttcttt ggcaacgaaa ctagtgctgc tctgcgtgca acttttgcac   300

ccaaagctca aaaggaaaac caaaacatca accgcaattt gcatcctcag gcatcctaca   360

aagtggcggt tcttggtgct gcaggaggaa ttggtcagcc actggcactt ctcattaaga   420

tgtcgccttt ggtttccgac ctgcatcttt atgatatcgc gaatgttaag ggagttgctg   480

ctgatatcag tcattgcaac actccttcaa aggttttgga tttcacaggt gcttctgagt   540

tggcaaattg tttgaaaggt gtggatgtag ttgttatacc tgctggtgtt cccagaaa     598
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<210>  272
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<213>  Trifolium repens

<400>  272
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Gly Arg Pro Leu Pro Gln Ser Asn Pro Phe Gly Leu Lys Val Asn Ser
            20                  25                  30


Gln Val Asn Phe Lys Thr Phe Ser Gly Leu Lys Ala Met Ser Ser Leu
        35                  40                  45


Arg Cys Glu Ser Glu Ser Ser Phe Phe Gly Asn Glu Thr Ser Ala Ala
    50                  55                  60


Leu Arg Ala Thr Phe Ala Pro Lys Ala Gln Lys Glu Asn Gln Asn Ile
65                  70                  75                  80


Asn Arg Asn Leu His Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly
                85                  90                  95


Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Ile Lys Met Ser
            100                 105                 110


Pro Leu Val Ser Asp Leu His Leu Tyr Asp Ile Ala Asn Val Lys Gly
            115                 120                 125


Val Ala Ala Asp Ile Ser His Cys Asn Thr Pro Ser Lys Val Leu Asp
            130                 135                 140
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Phe Thr Gly Ala Ser Glu Leu Ala Asn Cys Leu Lys Gly Val Asp Val
145                 150                 155                 160


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ttggaactgc ccaaacaggg aggccacttc ctcaatcaaa cccttttggt ttgaaagtca   180

attcccaggt taattttaag accttctctg gtctcaaggc catgtcatct ctaagatgcg   240

agtctgaatc atctttcttt ggcaacgaaa ctagtgctgc tctgcgtgca acttttgcac   300

ccaaagctca aaaggaaaac caaaacatca accgcaattt gcatcctcag gcatcctaca   360

aagtggcggt tcttggtgct gcaggaggaa ttggtcagcc actggcactt ctcattaaga   420

tgtcgccttt ggtttccgac ctgcatcttt atgatatcgc gaatgttaag ggagttgctg   480

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tggcaaattg tttg                                                    554


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cattaccatt cattcccaga ggtcgagatg gcagcatcag cagcagctac ttttactatt   120
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ggaactgccc aaacagggag gccacttcct caatcaaacc cttttggttt gaaagtcaat     180

tcccaggtta attttaagac cttctctggt ctcaaggcca tgtcatctct aagatgcgag     240

tctgaatcat ctttctttgg caacgaaact agtgctgctc tgcgtgcaac ttttgcaccc     300

aaagctcaaa aggaaaacca aaacatcaac cgcaatttgc atcctcaggc atcctacaaa     360

gtggcggttc ttggtgctgc aggaggaatt ggtcagccac tggcacttct cattaagatg     420

tcgcctttgg tttccgacct gcatctttat gatatcgcga atgttaaggg agttgctgct     480

gatatcagtc attgcaacac tccttcaaag gttttggatt tcacaggtgc ttctgagttg     540

gcaaattgtt tgaaaggtgt ggatgtagtt gttatacctg ctggtgttcc cag           .593
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gcccaaacag ggaggtcact tcctcaatca aacccttttg gtttgaaagt caattcccag     180

gttaatttta agaccttctc tggtctcaag gccatgtcgt ctctaagatg cgagtctgaa .   240

tcatctttct ttggcaacga aacttgtgct gctctgcgtg caacttttgc acccaaagct     300

caaaaggaaa accgaaacat caaccgcaat ttgcagcctc aggcatccta caaagtggcg    .360

gttctcggtg ctgcaggagg aattggtcag ccacttgcac ttctcattaa gatgtcgcct     420

ttggtttccg acctgcatct ttatgacatt gcgaatgtta agggagttgc tgctgatatc     480

agccattgca acactccttc aaaggttttg gatttcacag gtgcttctga gctagcaaat     540

tgtttgaaag gtgtggatgt tgttgttata cctgctggtg ttcctagaaa     .           590
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M80678527.ST25

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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tctctcaatt attattagtc cttagaaatg gaagcacatg cagctggagc caatcagagg   120
attgcaagaa tctctgctca tcttcaacct ccaaatttcc aggaaggagg tgatgttgca   180
attagcaaag ctaactgcag agcaaaaggt ggggcgccgg gattcaaagt agcaatcttg   240
ggggctgctg gtggaattgg tcaatccctt tctttgctgt tgaagatcaa tccattggtt   300
tcagttcttc atctttatga tgttgtcaac actcctggtg tcactgctga tgttagtcac   360
attgacaccg gtgctgtggt tcgtggcttt ctagggcagg cacaacttga gaatgcactt   420
acaggcatgg acttggtcgt tatacctgct ggtgtgccga ggaaacctgg aatgacaagg   480
gatgacttat ttaagataaa tgctggaatt gtgaggactc ttagcgaagg aattgccaag   540
agctgtccta atgcaattgt caacttgatt agcaatccag tgaattccac tgtgccaatt   600
gctgctgagg ttttcaagaa agccggtaca tatgatccaa agcgactttt aggggttaca   660
accctcgatg ttgtgagggc aaataccttt gtggcagaag tacttggtgt tgatccaaga   720
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gaggttgatg ttccagtggt aggagggcac gcaggagtca caatattacc tcttttgtca     780

caggttaagc ctcccagtag cttcaccgca gaagaaaccg aatacctgac aaancgcatt     840

caaaanggcg gaacacaagt tgttgaggca aaggctgggg ctggttcggc aacactantn     900

atggcctatg cagctgccaa gtttgctaac gcatgcctcc gtggcttgaa aggagaagcc     960

gggatagtgg agtgtgcttt tgttgattct caggttacgg aacttccttt ctttgcagcc    1020

aaggttcgtc ttggtcgcgg tggagcagaa gagatatatc aacttggtcc ccttaatgag    1080

tatgagagga ttggattaga aaaagcgaag aaagagttag caggaagcat ccagaaggga    1140

gtagaattca tcaaaaaaaa anaaagataa ggaaaaatta gttttgtatt gnctctttct    1200

atatctataa agaacttgtg taataattcc                                     1230
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            20                  25                  30


Ser Lys Ala Asn Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys Val
            35                  40                  45


Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Ser Leu Ser Leu Leu
        50                  55                  60


Leu Lys Ile Asn Pro Leu Val Ser Val Leu His Leu Tyr Asp Val Val
65                  70                  75                  80


Asn Thr Pro Gly Val Thr Ala Asp Val Ser His Ile Asp Thr Gly Ala
                85                  90                  95


Val Val Arg Gly Phe Leu Gly Gln Ala Gln Leu Glu Asn Ala Leu Thr
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100   105   110

Gly Met Asp Leu Val Val Ile Pro Ala Gly Val Pro Arg Lys Pro Gly
        115   120   125

Met Thr Arg Asp Asp Leu Phe Lys Ile Asn Ala Gly Ile Val Arg Thr
    130   135   140

Leu Ser Glu Gly Ile Ala Lys Ser Cys Pro Asn Ala Ile Val Asn Leu
145   150   155   160

Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe
                165   170   175

Lys Lys Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr Thr
            180   185   190

Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly Val
        195   200   205

Asp Pro Arg Glu Val Asp Val Pro Val Val Gly Gly His Ala Gly Val
210   215   220

Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro Pro Ser Ser Phe Thr
225   230   235   240

Ala Glu Glu Thr Glu Tyr Leu Thr Xaa Arg Ile Gln Xaa Gly Gly Thr
                245   250   255

Gln Val Val Glu Ala Lys Ala Gly Ala Gly Ser Ala Thr Leu Met Ala
            260   265   270

Tyr Ala Ala Ala Lys Phe Ala Asn Ala Cys Leu Arg Gly Leu Lys Gly
        275   280   285

Glu Ala Gly Ile Val Glu Cys Ala Phe Val Asp Ser Gln Val Thr Glu
290   295   300

Leu Pro Phe Phe Ala Ala Lys Val Arg Leu Gly Arg Gly Gly Ala Glu
305   310   315   320

Glu Ile Tyr Gln Leu Gly Pro Leu Asn Glu Tyr Glu Arg Ile Gly Leu
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Glu Lys Ala Lys Lys Glu Leu Ala Gly Ser Ile Gln Lys Gly Val Glu
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Phe Ile Lys Lys Lys Xaa Arg
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<210> 278

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tctctaatta ttattagtcc ttcgaaatgg aagcacatgc agctggtacc aatcagagga   120

ttgcaagaat ctctgctcat cttcagcctc caaatttcca ggaaggaggt gatgttgcaa   180

ttagcaaagc taactgcaga gcaaaaggtg gggcgccggg attcaaagta gcaatcttgg   240

gggctgctgg tggaattggt caatcccttt ctttgctgtt gaagatcaat ccattggttt   300

cagttcttca tctttatgat gttgtcaaca ctcctggtgt cactgctgat gttagtcaca   360

ttgacaccgg tgctgtggtt cgtggctttc tagggcaggc acaacttgag aatgcactta   420

caggcatgga cttggtcgtt atacctgctg gtgtgccgag gaaacctgga atgacaaggg   480

atgacttatt taagataaat gctggaattg tgaggactct tagcgaagga attgccaaga   540

gctgtcctaa tgcaattgtc aacttgatta gcaatccagt gaattccact gtgccaattg   600

ctgctgaggt tttcaagaaa gccggtacat atgatccaaa gcgactttta ngggtaacaa   660

ccctcgatgn tgt   673

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<211> 574

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aggattgcaa gaatctctgc tcatcttcaa cctccaaatt tccaggaagg aggtgatgtt     120

gcaattagca aagctaactg cagagcaaaa ggtggggcgc cgggattcaa agtagcaatc     180

ttgggggctg ctggtggaat tggtcaatcc ctttctttgc tgttgaagat caatccattg     240

gtttcagttc ttcatcttta tgatgttgtc aacactcctg gtgtcactgc tgatgttagt     300

cacattgaca ccggtgctgt ggttcgtggc tttctagggc aggcacaact tgagaatgca     360

cttacaggca tggacttggt cgttatacct gctggtgtgc cgaggaaacc tggaatgaca     420

agggatgact tatttaagat aaatgctgga attgtgagga ctcttagcga aggaattgcc     480

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aggattgcaa gaatctctgc tcatcttcaa cctccaaatt tccaggaagg aggtgatgtt     120

gcaattagca aagctaactg cagagcgaaa ggtggggcgc cgggattcaa agtagcaatc   . 180

ttgggggctg ctggtggaat tggtcaatcc ctttctttgc tgttgaagat caatccattg     240

gtttcagttc ttcatcttta tgatgttgtc aacactcctg gtgtcactgc tgatgttagt     300

cacattgata ccggtgctgt ggttcgtggc tttctagggc aggcacaact tgagaatgca .   360

cttacaggca tggacttggt cgttatacct gctggtgtgc cgaggaaacc tggaatgaca     420

agggatgact tatttaagat aaatgctgga attgtgagga ctctttctga aggaattgtc     480

aagagctgtc ctaatgcaat tgtcaacttg attagcaatc cagtgaattc cactgtgcca     540

att                                                                   543


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<212>  DNA
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ctcatcttcg cctccaaatt tccaggaagg aagtgatgtc gcaattagca aagctaactg      120

cagagcaaaa ggtggggcgc cgggattcaa agtagcaatc ttggggggctg ctggtggaat     180

tggtcaatcc ctttctttgc tgttgaagat caatccattg gtttcggttc ttcatcttta      240

tgatgttgtc aacactcctg gtgtcactgc tgatgttagt cacattgaca ccggtgctgt      300

ggttcgtggc tttctagggc aggcacaact tgagaatgca cttacaggca tggacttggc      360

cgttatacct gctggtgtgc cgaggaaacc tggaatgaca agggatgact tatttaagat      420

aaatgctgga attgtgagga ctctttctga aggaattgtc aagagctgtc ctaatgcaat      480

tgtcaacttg attagcaatc cagtgaattc cactgtgcca attgctgctg aggtcttcaa      540

gaaagccggt acatatgatc caaaacgact tttaggagtt acaaccctcg atg             593
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ttcaacctcc aaatttccag gaaggaggtg atgttgcaat tagcaaagct aactgcagag   120

caaaaggtgg ggcgccggga ttcaaagtag caatcttggg ggctgctggt ggaattggtc   180

aatccctttc tttgctgttg aagatcaatc cattggtttc ggttcttcat ctttatgatg   240

ttgtcaacac tcctggtgtc actgctgatg ttagtcacat tgacaccggt gctgtggttc   300

gtggctttct agggcaggca caacttgaga atgcacttac aggcatggac ttggtcgtta   360

tacctgctgg tgtgccgagg aaacctggaa tgacaaggga tgacttattt aagataaatg   420

ctggaattgt gaggactctt tctgaaggaa ttgtcaagag ctgtcctaat gcaattgtca   480

acttgattag caatccagtg aattccactg tgccaattgc tggtgaggtc ttcaagaaag   540

ccggnacata tgatccaaaa cnacttttaa gggttacaac cctngatgtt gngagggcaa   600

atacttttgt ggcanaagnc ttggngttga ncccaaanag ggtnatnttc cantggtagg   660

agggcccccn ggantacaan attacccttt ttt   693

<210> 283

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<213>   Trifolium repens


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<223>   n is a, c, g, or t

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cgggattcaa agtagcaatc ttgggggctg ctggtggaat tggtcaatcc ctttctttgc     180

tgttgaagat caatccattg gtttcagttc ttcatcttta tgatgttgtc aacactcctg     240

gtgtcactgc tgatgttagt cacattgaca ccggtgctgt ggttcgtggc tttctagggc     300

aggcacaact tgagaatgca cttacaggca tggacttggt cgttatacct gctggtgtgc     360

cgaggaaacc tggaatgaca agggatgact tatttaagat aaatgctgga attgtgagga     420

ctcttagcga aggaattgcc aagagctgtc ctaatgcaat tgtcaacttg attagcaatc     480

cagtgaattc cactgtgcca attgctgctg aggttttcaa gaaagccggt acatatgatc     540

caaagcgact tttag                                                     555


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<213>   Trifolium repens


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M80678527.ST25

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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gaggaaacct ggaatgacaa gggatgactt atttaagata aatgctggaa ttgtgaggac     120

tcttagcgaa ggaattgcca agagctgtcc taatgcaatt gtcaacttga ttagcaatcc     180

agtgaattcc actgtgccaa ttgctgctga ggttttcaag aaagccggta catatgattc     240

aaagcgactt ttaggggtaa caaccctcga tgttgtgagg gcaaatacct ttgtggcaga     300

agtacttggt gttgatccaa gagaggttga tgttccagng gtaggatggc acgcangagt     360

acaatattac ctcttttgtc acaggttaag cctnccagta ncttaccgna gaanaaaccg     420

aatacctgac anancgnatt caaaanggcg gaacacaagt cgttgaggca aag            473


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<212>  DNA
<213>  Trifolium repens


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<223> n is a, c, g, or t

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ggcagaagta cttggtgttg atccaagaga ggttgatgtt ccagtggtag gagggcacgc     120

aggagtcaca atattacctc ttttgtcaca ggttaagcct cccagtagct tcactgcaga     180

agaaaccgaa tacctgacaa atcgcattca aaatggtgga acagaagttg ttgaggcaaa     240

ggctggggct ggttcggcaa cactantaat ggcatatgca gctgccaagt ttgctaacgc     300

atgcctccgt ggcttgaaag gagaagccgg gatagtggag tgtgcttttg ttgattctca     360

ggttacggaa cttcctttct ttgcagccaa ggttcgtctt ggtcgcggtg gagcagaaga     420

gatataccaa cttggtcccc ttaatgagta tgagaggatt gggttggaaa aagcgaagaa     480

tgagttagcg ggaagcatcc agaagggagt agaattcatc agaaaataag tcagataagg     540

aaaaattagt tttgtattgn ctctttctat atctataaag aacttgtgta ataattcc      598
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<213> Trifolium repens

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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aagtttgcta acgcatgcct ccgtggcttg aaaggagaag ccgggatagt ggagtgtgct     120

tttgttgatt ctcaggttac ggaacttcct ttctttgcag ccaaggttcg tcttggtcgc     180

ggtggagcag aagagatata tcaacttggt ccccttaatg agtatgagag gattggatta     240

gaaaaagcga agaaagagtt agcaggaagc atccagaagg gagtagaatt catcacanaa     300

aaanaa                                                               306
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M80678527.ST25

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<213>  Trifolium repens


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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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tgctaacgca tgcctccgtg gcttgaaagg agaagccggg atagtggagt gtgctttTgt      120

tgattctcag gttacggaac ttcctttctt tgcagccaag gttcgtcttg gtcgcggtgg      180

agcagaagag atatatcaac ttggtcccct taatgagtat gagaggattg gattagaaaa      240

agcgaagaaa gagttagcag gaagcatcca gaagggagta gaattcatca aaaaaaaan      299


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<213>  Trifolium repens


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<223>  n is a, c, g, or t
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<222> (280)..(280)
<223> n is a, c, g, or t

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ttatggagcc aaattcagat gcaaatcaac gaatcgcaag aatctccggc cacctaaatc   120

ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg   180

caaaaggtgg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc   240

aacctctttc aatgttgatg aagatgaatc ctttggtttn agttcttcat ctttatgatg   300

ttgttaatac tcctggtgtt acttctgata ttagtcatat ggatactgct gctgttgttc   360

gagggttttt ggggcaaaat cagcttgagg atgcacttac aggtatggat ttggtaatca   420

ttcctgccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc aatataaatg   480

ccgggatcgt taaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag gcgattgtca   540

acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt ttcaaaagag   600

ccggtactta tgatcccaag agactttgg gagtgacaat gcttgatgtg gttcgggcca   660

atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc ccagttgtcg   720

gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca cattcctctt   780

tcacgacaaa ggaaattgag tacttgacag atcgcataca aaacggtgga actgaagttg   840

ttgaggccaa agctggagct ggctct   866

<210> 289
<211> 268
<212> PRT
<213> Trifolium repens

<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 289

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1   5   10   15

His Leu Asn Pro Pro Asn Phe Lys Met Asn Glu His Gly Asp Ser Ser
            20   25   30

Leu Thr Ser Phe His Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys
        35   40   45

Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Met
    50   55   60

Leu Met Lys Met Asn Pro Leu Val Xaa Val Leu His Leu Tyr Asp Val

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M80678527.ST25
65   70   75   80

Val Asn Thr Pro Gly Val Thr Ser Asp Ile Ser His Met Asp Thr Ala
                85   90   95

Ala Val Val Arg Gly Phe Leu Gly Gln Asn Gln Leu Glu Asp Ala Leu
                100   105   110

Thr Gly Met Asp Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro
            115   120   125

Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys
        130   135   140

Thr Leu Cys Glu Ala Ile Ala Lys Arg Cys Pro Lys Ala Ile Val Asn
145   150   155   160

Val Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val
                165   170   175

Phe Lys Arg Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr
                180   185   190

Met Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly
                195   200   205

Leu Asp Pro Arg Asp Val Asp Val Pro Val Val Gly Gly His Ala Gly
                210   215   220

Ile Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro His Ser Ser Phe
225   230   235   240

Thr Thr Lys Glu Ile Glu Tyr Leu Thr Asp Arg Ile Gln Asn Gly Gly
                245   250   255

Thr Glu Val Val Glu Ala Lys Ala Gly Ala Gly Ser
                260   265


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<223>    n is a, c, g, or t

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M80678527.ST25

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ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg    180

caaaaggtgg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc .  240

aacctctttc aatgttgatg aagatgaatc ccttggttta gttcttcatc tttatgatgt    300

tgttaatact cctggtgtta cttctgatat tagtcacatg gatactggtg ctgttgttcg    360

aggatttttg gggcaaaatc agcttgagga tgcacttaca ggtatggatt tggtaatcat    420

tcctgctggt gttccccgta aacctggaat gacaagagat gatctcttca atataaatgc    480

cgggatcgtt aaaacactct gtgaagcaat tgcgaagcga tgtcctaagg cgattgtcaa    540

cgtgattagt aatccggtta actccactgt cc                                  572


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<213>  Trifolium repens


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<223>  n is a, c, g, or t

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ctttatgatg ttgttaatac tcctggtgtt acttctgata ttagtcatat ggatactgct   120

gctgttgttc gagggttttt ggggcaaaat cagcttgagg atgcacttac aggtatggat   180

ttggtaatca ttcctgccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc   240

aatataaatg ccgggatcgt taaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag   300

gcgattgtca acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt   360

ttcaaaagag ccggtactta tgatcccaag agacttttgg gagtgacaat gcttgatgtg   420

gttcgggcca atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc   480
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M80678527.ST25

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ccagttgtcg gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca      540

cattcctctt tcacgacaaa ggaaattgag tacttg                                576
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<212>  DNA
<213>  Trifolium repens
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acttacaggt atggatttgg taatcattcc tgccggtgtt ccccgtaaac ctggaatgac      180

aagagatgat ctcttcaata taaatgccgg gatcgttaaa acactctgtg aagcaattgc      240

aaagcgatgt cctaaggcgg ttgtcaacgt gattagtaat ccggttaact ccactgtccc      300

cattgcggct gaagttttca aaagagccgg tacttatgat cccaagagac ttttgggagt      360

gacaatgctt gatgtggttc gggccaatac gtttgtggct gaagttcttg gtcttgatcc      420

aagggatgtg gatgtcccag ttgtcggagg acatgccgga atcaccattt tacctctgct      480

ttctcaggtt aaaccacatt cctctttcac gacaaaggaa attgagtact tgacagatcg      540

catacaaaac ggtggaactg aagttgttga ggccaaagct ggagctggct ct              592
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<213>  Trifolium repens
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                                    M80678527.ST25
tacggtcctt aaaaaatctg ttcttgtttt attttgtact tttttgtttt ggaagatcgt    120

tagatacatg tgtggtcttc tcaaagttga taaggaacca gtcactgtat tggtcactgg    180

tgctgcagga caaattggnt atgctcttgn tccaatgatt gcaagaggga tgatgctagg    240

cccaaatcaa cctggaattc ttcatatgct ngatattgaa ccaggattag aggcccttaa    300

aggggtgaag atggaactga ttgatggtgc tttcccactt cttagaggtg ttgttgctac    360

tacggatgtt gttgaagcat gcaaggatgt taacattgct gttatgcttg gtggatcccc    420

aaggaaggaa ggaatggaaa gaaaagatgt aatgtctaag aatgtttcaa tttacaaggc    480

tcaagcttca gctttggagg agcatgctgc tgcagattgt aaagtgctag tggtagccaa    540

tccagcaaac acaaatgctc taatattgaa agaatttgct ccatcaatcc ctgagaaaa     599
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<223>  Xaa can be any naturally occurring amino acid

<220>
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<220>
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<400>  294

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Thr Gly Ala Ala Gly Gln Ile Xaa Tyr Ala Leu Xaa Pro Met Ile Ala
            20                  25                  30


Arg Gly Met Met Leu Gly Pro Asn Gln Pro Gly Ile Leu His Met Xaa
        35                  40                  45


Asp Ile Glu Pro Gly Leu Glu Ala Leu Lys Gly Val Lys Met Glu Leu
    50                  55                  60


Ile Asp Gly Ala Phe Pro Leu Leu Arg Gly Val Val Ala Thr Thr Asp
65                  70                  75                  80


Val Val Glu Ala Cys Lys Asp Val Asn Ile Ala Val Met Leu Gly Gly
                85                  90                  95


Ser Pro Arg Lys Glu Gly Met Glu Arg Lys Asp Val Met Ser Lys Asn
            100                 105                 110
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Val Ser Ile Tyr Lys Ala Gln Ala Ser Ala Leu Glu Glu His Ala Ala
         115   120   125

Ala Asp Cys Lys Val Leu Val Val Ala Asn Pro Ala Asn Thr Asn Ala
    130   135   140

Leu Ile Leu Lys Glu Phe Ala Pro Ser Ile Pro Glu Lys
145   150   155

<210> 295
<211> 276
<212> DNA
<213> Trifolium repens

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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cggtccttaa aaaatctgtt cttgttttat tttgtacttt tttgttttgg aagatcgtta   120

gatacatgtg tggtcttctc aaagttgata aggaaccagt cactgtattg gtcactggtg   180

ctgcaggaca aattggntat gctcttgntn caatgattgc nanagggatg atgctangnc   . 240

caaatcnacc tggnattgtt gatatgctng ntnttg   276

<210> 296
<211> 594
<212> DNA
<213> Trifolium repens

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tccttaaaaa atctgttctt gttttatttt gtactttttt gttttggaag atcgttagat   120

acatgtgtgg tcttctcaaa gttgataagg aaccagtcac tgtattggtc actggtgctg   180

caggacaaat tggttatgct cttgttccaa tgattgcaag agggatgatg ctaggcccaa   240

atcaacctgt aattcttcat atgcttgata ttgaaccagg attagaggcc cttaaagggg   · 300

tgaagatgga actgattgat ggtgctttcc cacttcttag aggtgttgtt gctactacgg   360 ·

atgttgttga agcatgcaag gatgttaaca ttgctgttat gcttggtgga tccccaagga   420

aggaaggaat ggaaagaaaa gatgtaatgt ctaagaatgt ttcaatttac aaggctcaag   480

cttcagcttt ggaggagcat gctgctgcag attgtaaagt gctagtggta gccaatccag   540

caaacacaaa tgctctaata ttgaaagaat ttgctccatc aatccctgag aaaa   594

<210> 297
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<212> DNA
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<223> n is a, c, g, or t

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<220>
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<223> n is a, c, g, or t

<400> 297
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ttatggagcc aaattcagat gcaaatcaac gaatcgcaag aatctccggc cacctaaatc     120

ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg     180

caaaaggtgg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc     240

aacctctttc aatgttgatg aagatgaatc ctttggtttn agttcttcat ctttatgatg     300

ttgttaatac tcctggtgtt acttctgata ttagtcatat ggatactgct gctgttgttc     360

gagggttttt ggggcaaaat cagcttgagg atgcacttac aggtatggat ttggtaatca     420

ttcctgccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc aatataaatg     480

ccgggatcgt taaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag gcgattgtca     540

acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt ttcaaaagag     600

ccggtactta tgatcccaag agactttgg gagtgacaat gcttgatgtg gttcgggcca     660

atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc ccagttgtcg     720

gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca cattcctctt     780

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ttgaggccaa agctggagct ggctct                                         866
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<210> 298
<211> 268
<212> PRT
<213> Trifolium repens

<220>
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<400> 298

Met Glu Pro Asn Ser Asp Ala Asn Gln Arg Ile Ala Arg Ile Ser Gly
1   5   10   15

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His Leu Asn Pro Pro Asn Phe Lys Met Asn Glu His Gly Asp Ser Ser
            20              25              30

Leu Thr Ser Phe His Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys
        35              40              45

Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Met
    50              55              60

Leu Met Lys Met Asn Pro Leu Val Xaa Val Leu His Leu Tyr Asp Val
65              70              75              80

Val Asn Thr Pro Gly Val Thr Ser Asp Ile Ser His Met Asp Thr Ala
                85              90              95

Ala Val Val Arg Gly Phe Leu Gly Gln Asn Gln Leu Glu Asp Ala Leu
            100             105             110

Thr Gly Met Asp Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro
        115             120             125

Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys
    130             135             140

Thr Leu Cys Glu Ala Ile Ala Lys Arg Cys Pro Lys Ala Ile Val Asn
145             150             155             160

Val Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val
                165             170             175

Phe Lys Arg Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr
            180             185             190

Met Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly
        195             200             205

Leu Asp Pro Arg Asp Val Asp Val Pro Val Val Gly Gly His Ala Gly
    210             215             220

Ile Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro His Ser Ser Phe
225             230             235             240

Thr Thr Lys Glu Ile Glu Tyr Leu Thr Asp Arg Ile Gln Asn Gly Gly
                245             250             255

Thr Glu Val Val Glu Ala Lys Ala Gly Ala Gly Ser
            260             265
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<210>  299
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<212>  DNA
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<213> Trifolium repens

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<220>
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<223> n is a, c, g, or t

<220>
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<222> (14)..(14)
<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

<400> 299
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ttatggagcc aaattcagat gcaaatcaac gaatcgcaag aatctccggc cacctaaatc   120

ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg   180

caaaaggtgg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc   240

aacctctttc aatgttgatg aagatgaatc ccttggttta gttcttcatc tttatgatgt   300

tgttaatact cctggtgtta cttctgatat tagtcacatg gatactggtg ctgttgttcg   360

aggatttttg gggcaaaatc agcttgagga tgcacttaca ggtatggatt tggtaatcat   420

tcctgctggt gttccccgta aacctggaat gacaagagat gatctcttca atataaatgc   480

cgggatcgtt aaaacactct gtgaagcaat tgcgaagcga tgtcctaagg cgattgtcaa   540

cgtgattagt aatccggtta actccactgt cc   572

<210> 300
<211> 576
<212> DNA
<213> Trifolium repens

<220>
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<223> n is a, c, g, or t

<220>
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<222> (12)..(12)
<223> n is a, c, g, or t

<220>
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<222> (22)..(22)
<223> n is a, c, g, or t

<400> 300
gtgncatagg tnaccctctt tnatgttgat gaagatgaat cctatggttt agttcttcat   60

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ctttatgatg ttgttaatac tcctggtgtt acttctgata ttagtcatat ggatactgct    120

gctgttgttc gagggttttt ggggcaaaat cagcttgagg atgcacttac aggtatggat    180

ttggtaatca ttcctgccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc    240

aatataaatg ccgggatcgt taaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag    300

gcgattgtca acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt    360

ttcaaaagag ccggtactta tgatcccaag agactttggg agtgacaat gcttgatgtg     420

gttcgggcca atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc    480

ccagttgtcg gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca    540.

cattcctctt tcacgacaaa ggaaattgag tacttg                              576
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<212>   DNA
<213>   Trifolium repens


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<222>   (9)..(10)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (19)..(19)
<223>   n is a, c, g, or t

<400>   301
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gtatatggat actgctgctg ttgttcgagg gttttgggg caaaatcagc ttgaggatgc     120

acttacaggt atggatttgg taatcattcc tgccggtgtt ccccgtaaac ctggaatgac    180

aagagatgat ctcttcaata taaatgccgg gatcgttaaa acactctgtg aagcaattgc    240

aaagcgatgt cctaaggcgg ttgtcaacgt gattagtaat ccggttaact ccactgtccc    300

cattgcggct gaagttttca aaagagccgg tacttatgat cccaagagac ttttgggagt    360

gacaatgctt gatgtggttc gggccaatac gtttgtggct gaagttcttg gtcttgatcc    420

aagggatgtg gatgtcccag ttgtcggagg acatgccgga atcaccattt tacctctgct    480

ttctcaggtt aaaccacatt cctctttcac gacaaaggaa attgagtact tgacagatcg    540

catacaaaac ggtggaactg aagttgttga ggccaaagct ggagctggct ct            592
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<210>   302
<211>   647
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (2)..(2)
<223>   n is a, c, g, or t
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<220>
<221> misc_feature
<222> (14)..(14)
<223> n is a, c, g, or t

<400> 302
gnaatcctct ttgnctcccc taccctcctt tttttccctt ccttcttaca ccttctctta   60

tcaactttcc acctctgaac aaaacttcaa tcttttctca ttttcttata ccctttaca   120

aacttcttca taaagtgtta ggtttttttt tattactctt ttcaagaacc acaaaaacag   180

tgtttcttga attctttgga attttttttt tcctgcaacc atggccttgg cacacttaaa   240

caaccccact tgctcaaaaa ctcaacttca ctcatcacaa ctctcatttc tctctaggac   300

tctccctagg caatatcact gtacttttgc accacttcac agaactcaac atggcagaat   360

tacttgttct gttgcaccaa atcaagtgca ggctccagct gtacaatcac aggatcccaa   420

gaataagcct gattgctatg gtgtcttctg ccttacctat gatttgaagg ctgaagagga   480

gacaaaatcc tggaagaaat taatcaacat tgcagtctca ggtgctgctg gaatgatttc   540

caatcatcta cttttcaagc ttgcatctgg tgaagttttt ggcccaaatc aacctattgc   600

gctgaaatta ttaggatcag aaaggtcctt ccaagctctt gaaggtg   647

<210> 303
<211> 142
<212> PRT
<213> Trifolium repens

<400> 303

Met Ala Leu Ala His Leu Asn Asn Pro Thr Cys Ser Lys Thr Gln Leu
1   5   10   15

His Ser Ser Gln Leu Ser Phe Leu Ser Arg Thr Leu Pro Arg Gln Tyr
            20   25   30

His Cys Thr Phe Ala Pro Leu His Arg Thr Gln His Gly Arg Ile Thr
            35   40   45

Cys Ser Val Ala Pro Asn Gln Val Gln Ala Pro Ala Val Gln Ser Gln
        50   55   60

Asp Pro Lys Asn Lys Pro Asp Cys Tyr Gly Val Phe Cys Leu Thr Tyr
65   70   75   80

Asp Leu Lys Ala Glu Glu Glu Thr Lys Ser Trp Lys Lys Leu Ile Asn
                85   90   95

Ile Ala Val Ser Gly Ala Ala Gly Met Ile Ser Asn His Leu Leu Phe
                100   105   110

Lys Leu Ala Ser Gly Glu Val Phe Gly Pro Asn Gln Pro Ile Ala Leu
            115   120   125

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```
Lys Leu Leu Gly Ser Glu Arg Ser Phe Gln Ala Leu Glu Gly
    130             135             140
```

```
<210>   304
<211>   602
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (2)..(2)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (14)..(14)
<223>   n is a, c, g, or t

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caactttcca cctctgaaca aaacttctat cttttctcat tttcttatac ccttttagaa     120

acttcttcat aaagtgttat ttttttttat tactcttttc aagaatcaca aaaacagtgt     180

ttcttgaatt ctttgtaatt ttttttttcc tgcaaccatg gccttggcac agttaaacaa     240

tcccacttgc tcaaaaactc aacttcactc atcacaactc tcattttgt ctaggactct       300

ccctaggcaa tatcactgta cttttgcacc acttcacaga actcaacatg gcagaattac     360

ttgttctgtt gcaccaaatc aagtgcaggc tccagctgta caatcacagg atcccaagaa     420

taagcctgat tgctatggtg tcttctgcct tacctatgat ttgaaggctg aagaggagac     480

aaaatcctgg aagaaattaa tcaacattgc agtctcaggt gctgctggaa tgatttccaa     540

tcatctactt ttcaagcttg catctggtga agttttggt ccaaatcaac ctattgcgct       600

ga                                                                    602


<210>   305
<211>   599
<212>   DNA
<213>   Trifolium repens


<220>
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<222>   (27)..(27)
<223>   n is a, c, g, or t

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tatacccttt tacaaacttc ttcataaagt gttgggtttt tttttattac tcttttcaag     120

aaccacaaaa acagtgtttc ttgaattctt ggaatttttt tttcctgcaa ccatggcttt     180

ggcacactta acaaccccca cttgctcaaa aactcaactt cattcatcac agctctcatt     240

tctctctagg actctcccta ggcaatatca ctgtactttt gcaccacttc acagaactca     300

acatggcaga attacttgtt ctgttgcacc aaatcaagtg caggctccag ctgtacaatc     360
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acaggatccc aagaataagc ctgattgcta tggtgtcttc tgccttacct atgatttgaa   420

ggctgaagag gagacaaaat cctggaagaa attaatcaac attgcagtct caggtgctgc   480

tggaatgatt tccaatcatc tacttttcaa gcttgcatct ggtgaagttt ttggcccaaa   540

tcaacctatt gcgctgaaat tattaggatc agaaaggtcc ttccaagctc ttgaaggtg   599

<210>   306
<211>   569
<212>   DNA
<213>   Trifolium repens

<220>
<221>   misc_feature
<222>   (8)..(8)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (12)..(12)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (14)..(14)
<223>   n is a, c, g, or t

<400>   306
gcaaagcnct cncngacctg gtgtggagcg agcagctttg ctagacataa atgggcagat   60

ttttgcggag cagggaaaag ctctaaatgc agtcgcatct cgcaatgtca aagttatagt   120

tgtgggaaac ccttgcaata caaatgcatt aatatgcttg aagaatgctc caaatattcc   180

tgcaaaaaat tttcatgctt taacccgttt agatgagaac agagcaaaat gtcagctagc   240

cctcaaggca ggtgtcttct acgataaagt gtcgaatatg acgatatggg gaaaccactc   300

aactactcag gtccccgatt tcttaaatgc cagaatcgat ggtttgcctg tcaaagaagt   360

gattaaggat caaaagtggt tagaggaaga gttcaccgaa aaagttcaaa agagaggtgg   420

cgtgcttatt caaaagtggg gaagatcgtc tgctgcatca acttctgtgt cgatagttga   480

tgccatacga tctttgatca ctcctactcc ggagggtgat tggttttcta ctggtgtgta   540

tacagctgga aatccttatg gaatagctg   569

<210>   307
<211>   189
<212>   PRT
<213>   Trifolium repens

<220>
<221>   misc_feature
<222>   (3)..(5)
<223>   Xaa can be any naturally occurring amino acid

<400>   307

Gln Ser Xaa Xaa Xaa Pro Gly Val Glu Arg Ala Ala Leu Leu Asp Ile
1   5   10   15

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```
Asn Gly Gln Ile Phe Ala Glu Gln Gly Lys Ala Leu Asn Ala Val Ala
              20              25              30

Ser Arg Asn Val Lys Val Ile Val Val Gly Asn Pro Cys Asn Thr Asn
        35              40              45

Ala Leu Ile Cys Leu Lys Asn Ala Pro Asn Ile Pro Ala Lys Asn Phe
    50              55              60

His Ala Leu Thr Arg Leu Asp Glu Asn Arg Ala Lys Cys Gln Leu Ala
65              70                  75              80

Leu Lys Ala Gly Val Phe Tyr Asp Lys Val Ser Asn Met Thr Ile Trp
                85              90              95

Gly Asn His Ser Thr Thr Gln Val Pro Asp Phe Leu Asn Ala Arg Ile
            100             105             110

Asp Gly Leu Pro Val Lys Glu Val Ile Lys Asp Gln Lys Trp Leu Glu
        115             120             125

Glu Glu Phe Thr Glu Lys Val Gln Lys Arg Gly Gly Val Leu Ile Gln
    130             135             140

Lys Trp Gly Arg Ser Ser Ala Ala Ser Thr Ser Val Ser Ile Val Asp
145             150             155             160

Ala Ile Arg Ser Leu Ile Thr Pro Thr Pro Glu Gly Asp Trp Phe Ser
                165             170             175

Thr Gly Val Tyr Thr Ala Gly Asn Pro Tyr Gly Ile Ala
            180             185
```

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<210>  308
<211>  558
<212>  DNA
<213>  Trifolium repens

<220>
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<223>  n is a, c, g, or t

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gctgcttgtg tcgtcgcctc cagctcctcc tcctccactg tgccaaccga attacaaacc   120

aaaaaaatgg cgacttgttt gcaaacacaa ctcctccaca caagaccttt tcagtttcgg   180

tcttcctcgt cgacaagacc aacttcccta agatgttccg ccgccacccc atccaccaaa   240

aaatcctaca aaatcactct tcttccgggt gatggcatag gtcctgaagt cgtttccgtc   300
```

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gctaaagacg ttcttctcct cactggatcc atccatggga ttaaacttga gtttcaagag    360

aagcttttgg gtggtgctgc tcttgatgct actggagttc ctttacctga tgatactctt    420

tctgttgcta agcaatctga tgctgttctt cttggtgcta ttggagggta taaatgggat    480

aaaaatgaga aacagctgaa gccagaaact ggattgcttc agctacgaga agggcttcaa    540

gtttttgcta atctcaga                                                  558
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<210> 309
<211> 144
<212> PRT
<213> Trifolium repens

<400> 309

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Met Ala Thr Cys Leu Gln Thr Gln Leu Leu His Thr Arg Pro Phe Gln
1               5                   10                  15

Phe Arg Ser Ser Ser Ser Thr Arg Pro Thr Ser Leu Arg Cys Ser Ala
            20                  25                  30

Ala Thr Pro Ser Thr Lys Lys Ser Tyr Lys Ile Thr Leu Leu Pro Gly
        35                  40                  45

Asp Gly Ile Gly Pro Glu Val Val Ser Val Ala Lys Asp Val Leu Leu
    50                  55                  60

Leu Thr Gly Ser Ile His Gly Ile Lys Leu Glu Phe Gln Glu Lys Leu
65                  70                  75                  80

Leu Gly Gly Ala Ala Leu Asp Ala Thr Gly Val Pro Leu Pro Asp Asp
                85                  90                  95

Thr Leu Ser Val Ala Lys Gln Ser Asp Ala Val Leu Leu Gly Ala Ile
            100                 105                 110

Gly Gly Tyr Lys Trp Asp Lys Asn Glu Lys Gln Leu Lys Pro Glu Thr
            115                 120                 125

Gly Leu Leu Gln Leu Arg Glu Gly Leu Gln Val Phe Ala Asn Leu Arg
    130                 135                 140
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<210> 310
<211> 713
<212> DNA
<213> Trifolium repens

<220>
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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (9)..(9)

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<220>
<221> misc_feature
<222> (663)..(663)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (713)..(713)
<223> n is a, c, g, or t

<400> 310
gnnacattnc cgaatgctgc tgaactaggg agtgattccc ttggagccta tgtcatctct   60

atggcctcaa gtgcaagcga tgtccttgca gtagagcttt tacagaagga tgcacgtctt   120

acagtttgtg gagaattagg aagagcatgt ccgggtggaa cgcttcgggt ggttcctcta   180

tttgaaactg tgcaagacct gagaggagct ggtgcagtta tcagaaaact tttatcaatc   240

gattggtacc gccaacacat cattaagaac cataacggac accaagaggt tatggtcggt   300

tattctgatt ctggtaaaga tgccgggcgc tttactgctg cttgggaact ttacaaagct   360

caagaggatg tagtggctgc ttgcaataag tacgatacta aggttacttt gttccacggc   420

cgcggaggga gtattggacg tggcggaggc ccaacatatc tggctattca gtcccagcca   480

cctggctctg tgatgggaac ccttcggtca actgagcagg gagagatggt gcaggccgag   540

tttgggttgc cacagacagc agttagacaa cttgaaatat acacaacagc tgtgctactt   600

gctacacgtc gtccaccact cccacctcga gaagaaaaat ggcgtaatct aatggaagac   660

atntcaaaaa tcagttgtca gtcctaccgc agtgtagtct atgaaaatcc agn   713

<210> 311
<211> 237
<212> PRT
<213> Trifolium repens

<220>
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<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (221)..(221)
<223> Xaa can be any naturally occurring amino acid

<400> 311

Xaa Thr Xaa Pro Asn Ala Ala Glu Leu Gly Ser Asp Ser Leu Gly Ala
1   5   10   15

Tyr Val Ile Ser Met Ala Ser Ser Ala Ser Asp Val Leu Ala Val Glu
            20   25   30

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```
Leu Leu Gln Lys Asp Ala Arg Leu Thr Val Cys Gly Glu Leu Gly Arg
         35              40              45

Ala Cys Pro Gly Gly Thr Leu Arg Val Val Pro Leu Phe Glu Thr Val
     50              55              60

Gln Asp Leu Arg Gly Ala Gly Ala Val Ile Arg Lys Leu Leu Ser Ile
65              70              75              80

Asp Trp Tyr Arg Gln His Ile Ile Lys Asn His Asn Gly His Gln Glu
             85              90              95

Val Met Val Gly Tyr Ser Asp Ser Gly Lys Asp Ala Gly Arg Phe Thr
             100             105             110

Ala Ala Trp Glu Leu Tyr Lys Ala Gln Glu Asp Val Val Ala Ala Cys
         115             120             125

Asn Lys Tyr Asp Thr Lys Val Thr Leu Phe His Gly Arg Gly Gly Ser
     130             135             140

Ile Gly Arg Gly Gly Gly Pro Thr Tyr Leu Ala Ile Gln Ser Gln Pro
145             150             155             160

Pro Gly Ser Val Met Gly Thr Leu Arg Ser Thr Glu Gln Gly Glu Met
             165             170             175

Val Gln Ala Glu Phe Gly Leu Pro Gln Thr Ala Val Arg Gln Leu Glu
         180             185             190

Ile Tyr Thr Thr Ala Val Leu Leu Ala Thr Arg Arg Pro Pro Leu Pro
         195             200             205

Pro Arg Glu Glu Lys Trp Arg Asn Leu Met Glu Asp Xaa Ser Lys Ile
210             215             220

Ser Cys Gln Ser Tyr Arg Ser Val Val Tyr Glu Asn Pro
225             230             235
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<210>   312
<211>   576
<212>   DNA
<213>   Trifolium repens

<220>
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<223>   n is a, c, g, or t

<220>
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<222>   (9)..(9)
<223>   n is a, c, g, or t
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<220>
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<222> (575)..(576)
<223> n is a, c, g, or t

<400> 312
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atggcctcaa gtgcaagcga tgtccttgca gtagagcttt tcagaaggat gcacgacttg     120

ctgctattgg agagttcgga agagcatgtc ctggtggaac gttgcgggtt gtccctctat     180

ttgaaactgt gaaggaccta agaggagctg gttcagttat ccggaaactt ttatcgatag     240

actggtaccg tgaacacatc attaagaacc acaatggaca tcaagaggtt atggttggat     300

attctgattc gggtaaagat gctggccgct tcactgctgc ttgggaactt tacaaagctc     360

aggaggatgt tgtagctgct tgcaatgatt atggtattaa agttacactg tttcatggcc     420

gtggaggcag tattggtcga ggtggtggcc ctacatatct ggctattcag tcccaaccac     480

ctgggtctgt gatgggaaca cttcggtcta ctgagcaggg agaaatggta gaggccaagt     540

ttgggttacc acagatagct gttagacaac ttgann                              576
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<210> 313
<211> 570
<212> DNA
<213> Trifolium repens
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<223> n is a, c, g, or t
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<222> (570)..(570)
<223> n is a, c, g, or t
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ggtggaacgc ttcgggtggt tcctctattt gaaactgtgc aagacctgag aggagctggt     120

gcagttatca gaaaacttt atcaatcgat tggtaccgcc aacacatcat taagaaccat     180

aacggacacc aagaggttat ggtcggttat tctgattctg gtaaagatgc cgggcgcttt     240

actgctgctt gggaacttta caaagctcaa gaggatgtag tggctgcttg caataagtac     300

gatactaagg ttactttgtt ccacggccgc ggagggagta ttggacgtgg cggaggccca     360

acatatctgg ctattcagtc ccagccacct ggctctgtga tgggaaccct tcggtcaact     420

gagcagggag agatggtgca ggccgagttt gggttgccac agacagcagt tagacaactt     480

gaaatataca caacagctgt gctacttgct acacgtcgtc caccactccc acctcgagaa     540

gaaaaatggc gtaatctaat ggaagacatn                                    570
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<210> 314
<211> 619
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<212>   DNA
<213>   Trifolium repens


<220>
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<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (619)..(619)
<223>   n is a, c, g, or t

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gtggaacgct tcgggtggtt cctctatttg aaactgtgca agacctgaga ggagctggtg     120

cagttatcag aaaacttta tcaatcgatt ggtaccgcca acacatcatt aagaaccata     180

acggacacca agaggttatg gtcggttatt ctgattctgg taaagatgcc gggcgcttta     240

ctgctgcttg gaactttac aaagctcaag aggatgtagt ggctgcttgc aataagtacg     300

atactaaggt tactttgttc cacggccgcg agggagtat tggacgtggc ggaggcccaa     360

catatctggc tattcagtcc cagccacctg gctctgtgat gggaacccttt cggtcaactg     420

agcagggaga gatggtgcag gccgagtttg ggttgccaca gacagcagtt agacaacttg     480

aaatatacac aacagctgtg ctacttgcta cacgtcgtcc accactccca cctcgagaag     540

aaaaatggcg taatctaatg gaagacattt caaaaatcag ttgtcagtcc taccgcagtg     600

tagtctatga aaatccagn                                                  619


<210>   315
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<212>   DNA
<213>   Trifolium repens


<220>
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<223>   n is a, c, g, or t

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tctgaaattc ctgaagaagc cacattcacc gatgttgatg agttcttgga acctcttgaa     120

ctatgctaca gatcactctg tgcttgtggt gatcgtgcga ttgccgatgg aagccttctt     180

gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa     240

gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc     300

taccaagact ggtctgaaga aaaaagacag gaatggcttt tgtctgagtt ggttggcaaa     360

aggccgcttt ttggacctga cctacctcaa accgatgaaa ttagagaagt tttagagaca     420

tttcatgtca tagcagaact tccatcagac aactttggag cctatatcat ttcgatggca     480

actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat     540
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M80678527.ST25
ccgttaagag ttgttccgtt gtttgagaaa cttgctgatc tcgagtctgc tcctgctg   598

<210> 316
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<212> PRT
<213> Trifolium repens

<220>
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<223> Xaa can be any naturally occurring amino acid

<400> 316

Xaa Arg Asp Lys Leu Tyr Arg Thr Arg Glu Arg Ser Arg Tyr Leu Leu
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Ala His Gly Tyr Ser Glu Ile Pro Glu Glu Ala Thr Phe Thr Asp Val
                20   25   30

Asp Glu Phe Leu Glu Pro Leu Glu Leu Cys Tyr Arg Ser Leu Cys Ala
            35   40   45

Cys Gly Asp Arg Ala Ile Ala Asp Gly Ser Leu Leu Asp Phe Leu Arg
    50   55   60

Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg Leu Asp Ile Arg Gln
65   70   75   80

Glu Ser Asp Arg His Thr Asp Val Met Asp Ala Ile Thr Lys His Leu
                85   90   95

Glu Ile Gly Ser Tyr Gln Asp Trp Ser Glu Glu Lys Arg Gln Glu Trp
                100   105   110

Leu Leu Ser Glu Leu Val Gly Lys Arg Pro Leu Phe Gly Pro Asp Leu
        115   120   125

Pro Gln Thr Asp Glu Ile Arg Glu Val Leu Glu Thr Phe His Val Ile
    130   135   140

Ala Glu Leu Pro Ser Asp Asn Phe Gly Ala Tyr Ile Ile Ser Met Ala
145   150   155   160

Thr Ala Pro Ser Asp Val Leu Ala Val Glu Leu Leu Gln Arg Glu Cys
                165   170   175

Lys Ile Lys Asn Pro Leu Arg Val Val Pro Leu Phe Glu Lys Leu Ala
                180   185   190

Asp Leu Glu Ser Ala Pro Ala
                195

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<210>  317
<211>  598
<212>  DNA
<213>  Trifolium repens


<220>
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<222>  (2)..(2)
<223>  n is a, c, g, or t

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tctgaaattc ctgaagaagc cacattcacc gatgttgatg agttcttgga acctcttgaa     120

ctatgctaca gatcactctg tgcttgtggt gatcgtgcga ttgccgatgg aagccttctt     180

gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa .   240

gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc     300

taccaagact ggtctgaaga aaaaagacag gaatggcttt tgtctgagtt ggttggcaaa     360

aggccgcttt ttggacctga cctacctcaa accgatgaaa ttagagaagt tttagagaca     420

tttcatgtca tagcagaact tccatcagac aactttggag cctatatcat ttcgatggca     480

actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat     540

ccgttaagag ttgttccgtt gtttgagaaa cttgctgatc tcgagtctgc tcctgctg      598


<210>  318
<211>  584
<212>  DNA
<213>  Trifolium repens


<220>
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<222>  (584)..(584)
<223>  n is a, c, g, or t

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tctgaaattc ctgaagaagc cacattcacc gatgttgatg agttcttgga acctcttgaa     120

ctatgctaca gatcactctg tgcttgtggt gatcgtgcga ttgccgatgg aagccttctt     180

gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa     240

gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc     300

taccaagact ggtctgaaga aaaaagacag gaatggcttt tgtctgagtt ggttggcaaa     360

aggccgcttt ttggacctga cctacctcaa accgatgaaa ttagagaagt tttagagaca     420

tttcatgtca tagcagaact tccatcagac aactttggag cctatatcat ttcgatggca     480

actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat     540

ccgttaagag ttgttccgtt gtttgagaaa cttgctgatc tcgn                      584


<210>  319
<211>  575
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<212> DNA
<213> Trifolium repens

<220>
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<222> (15)..(15)
<223> n is a, c, g, or t

<220>
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<222> (575)..(575)
<223> n is a, c, g, or t

<400> 319
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cacaaattgc tgttaggttt cgttgtactt tcccgtgcaa tccatagtat cttggaggaa     120

caaactagat tttccaccta ggtcgtcacg agattttcct cttcactatt tttctttttc     180

atataataac tcaacacttt ttctagctac ttactagtac tgtgtaacac aaattttatt     240

cattatggct actcctcgca acattgaaaa aatggcttca attgatgctc aattgagact     300

actagcacca aggaaagttt ctgatgatga taaacttgtc gagtatgatg ctttgttatt     360

ggatcgattc cttgacattc ttcaagattt gcatggagaa gatatcagac aaactgttca     420

agattgttat gagttatcgg cagagtatga aggggagctt aagccggaga aattggagga     480

acttgggaat atgcttactg gtcttgatgc tggagattct attgttatag caaaatcatt     540

ttctcatatg cttaatttgg caaacttggc agagn                               575
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<210> 320
<211> 110
<212> PRT
<213> Trifolium repens

<400> 320

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Met Ala Thr Pro Arg Asn Ile Glu Lys Met Ala Ser Ile Asp Ala Gln
1               5                   10                  15


Leu Arg Leu Leu Ala Pro Arg Lys Val Ser Asp Asp Asp Lys Leu Val
            20                  25                  30


Glu Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp
        35                  40                  45


Leu His Gly Glu Asp Ile Arg Gln Thr Val Gln Asp Cys Tyr Glu Leu
    50                  55                  60


Ser Ala Glu Tyr Glu Gly Glu Leu Lys Pro Glu Lys Leu Glu Glu Leu
65                  70                  75                  80


Gly Asn Met Leu Thr Gly Leu Asp Ala Gly Asp Ser Ile Val Ile Ala
                85                  90                  95


Lys Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu
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100   105   . 110

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<211>   575
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<213>   Trifolium repens


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<223>   n is a, c,. g, or t

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caaactagat tttccaccta ggtcgtcacg agattttcct cttcactatt tttctttttc   180

atataataac tcaacacttt ttctagctac ttactagtac tgtgtaacac aaattttatt   240

cattatggct actcctcgca acattgaaaa aatggcttca attgatgctc aattgagact   300

actagcacca aggaaagttt ctgatgatga taaacttgtc gagtatgatg ctttgttatt   360

ggatcgattc cttgacattc ttcaagattt gcatggagaa gatatcagac aaactgttca .  420

agattgttat gagttatcgg cagagtatga aggggagctt atgccggaga aattggagga   480

acttgggaat atgcttactg gtcttgatgc tggagattct attgttatag caaaatcatt   540

ttctcatatg cttaatttgg caaacttggc agagn                          . 575


<210>   322
<211>   537
<212>   DNA
<213>   Trifolium repens


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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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ttgctgttag gtttcgttgt actttcccgt gcaatccata gtatcttgga ggaacaaact   120

agattttcca cctaggttgt cacgagattt tcctcttcac tatttttctt tttcatataa   180

taattcaaca ttttttctag ctacttacta gtactgtgta acacaaattt tattcattat   240

ggctactcct cgcaacattg aaaaaatggc ttcaattgat gctcaattga gactactagc   300
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                              M80678527.ST25
accaaggaaa gtttctgatg atgataaact tgtcgagtat gatgctttgt tattggatcg    360

attccttgac attcttcaag atttgcatgg agaagatatc agacaaactg ttcaagattg    420

ttatgagtta tcggcagagt atgaagggga gcttaagccg gagaaattgg aggaacttgg    480

gaatatgctt actggtcttg atgctggaga ttctattgtt atagcaaaat catttttn     537
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<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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tgaagagctt catagatcct caaagaaaga tgcaaaacat tatattgagt tttggaaaca   120

gattcctcca aacgagccat atcgtgttat tcttggaggt gtgagggaca aactgtataa   180

tacacgtgaa cgtgctcgac agttattagc aaatggaacc tctgacatcc ttgaagagac   240

aaccttcacg aatgttgagc agtttctgga gcctcttgaa ctgtgttata ggtcactttg   300

tgcatgtggt gaccgatcaa tagcagacgg aagccttctt gatttcttgc gacaagtttc   360

tacatttgga ctttcacttg taagactcga catccgtcaa gagtcagaca ggcacacaga   420

cgttatggat gcaattacaa aacacttgga gattggatct taccgagaat ggtcggaaga   480

acgcaggcag gaatggctct tgtctgagct tagtggaaaa cgccctctct tcggccatga   540

tcttcctaag acagaagaaa ttgccgatgt tttagatacc ttncacgtna tttcanaact   600

tncctcanat agctttggtg cctatatcat ctcaatggca acctccccat ctgatgtgct   660

agctgtcgag cttttacaac gtgaatgtca tgtgaagcag ccgttaanag ttgttccact   720

gtttgaaaag ctcgccngtc ttgagtctgc tcctgctgcg gnagcgcgtt ttttnttaga   780

ttgggncana accgnnntaa tggaaagcag aagttntgat aggtactcan actngggaaa   840

agatgctggc cgnn   854

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<212> PRT
<213> Trifolium repens

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<223> Xaa can be any naturally occurring amino acid

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<400> 324

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Glu Asp Leu Met Phe Glu Leu Ser Met Trp Arg Cys Asn Asp Glu Leu
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Arg Val Arg Ala Glu Glu Leu His Arg Ser Ser Lys Lys Asp Ala Lys
            20              25              30


His Tyr Ile Glu Phe Trp Lys Gln Ile Pro Pro Asn Glu Pro Tyr Arg
            35              40              45


Val Ile Leu Gly Gly Val Arg Asp Lys Leu Tyr Asn Thr Arg Glu Arg
    50              55              60


Ala Arg Gln Leu Leu Ala Asn Gly Thr Ser Asp Ile Leu Glu Glu Thr
65              70              75              80


Thr Phe Thr Asn Val Glu Gln Phe Leu Glu Pro Leu Glu Leu Cys Tyr
            85                  90                  95


Arg Ser Leu Cys Ala Cys Gly Asp Arg Ser Ile Ala Asp Gly Ser Leu
            100             105             110


Leu Asp Phe Leu Arg Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg
        115             120             125


Leu Asp Ile Arg Gln Glu Ser Asp Arg His Thr Asp Val Met Asp Ala
    130             135             140


Ile Thr Lys His Leu Glu Ile Gly Ser Tyr Arg Glu Trp Ser Glu Glu
145             150             155             160


Arg Arg Gln Glu Trp Leu Leu Ser Glu Leu Ser Gly Lys Arg Pro Leu
                165             170             175


Phe Gly His Asp Leu Pro Lys Thr Glu Glu Ile Ala Asp Val Leu Asp
            180             185             190


Thr Xaa His Xaa Ile Ser Xaa Leu Xaa Ser Xaa Ser Phe Gly Ala Tyr
        195             200             205


Ile Ile Ser Met Ala Thr Ser Pro Ser Asp Val Leu Ala Val Glu Leu
    210             215             220


Leu Gln Arg Glu Cys His Val Lys Gln Pro Leu Xaa Val Val Pro Leu
225             230             235             240


Phe Glu Lys Leu Ala Xaa Leu Glu Ser Ala Pro Ala Ala Xaa Ala Arg
            245             250             255


Phe Xaa Leu Asp Trp Xaa Xaa Thr Xaa Xaa Met Glu Ser Arg Ser Xaa
        260             265             270
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Asp Arg Tyr Ser Xaa Xaa Gly Lys Asp Ala Gly Xaa
        275   280

<210>   325
<211>   693
<212>   DNA
<213>   Trifolium repens

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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tcttactgcc tcattacacg ggtgagaagg agtgaattgc tccaatggca acaaacaaaa    120

tggaaaaaat ggcatcaatt gatgcacagc ttagacaatt agtaccagca aaagttagtg    180

aagatgataa acttattgag tatgatgctt tgttgttgga tcggtttctt gatatccttc    240

aggatttaca tggagaggat ctgaaagatt ctgttcaaga agtgtatgaa ctttctgcgg    300

agtatgaaag aaagcatgat cctaagaaac ttgaagagct cggaaatttg ataacaagtt    360

tagatgcagg agattcaatt gttgttgcta agtccttttc gcacatgctt aacttggcca    420

acttagctga agaggttcag attgctcatc gtcgaaggaa caagttgaag aaaggagatt    480

ttagggatga gagcaatgca actaccgaat cagacatcga agaaactctt aagagacttg    540

tgtttaatat gaagaaatct cctcaggaag ttnttgatgc gttgaagaac cnnaccgttg    600

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Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp Leu
            35   40   45

His Gly Glu Asp Leu Lys Asp Ser Val Gln Glu Val Tyr Glu Leu Ser
        50   55   60

Ala Glu Tyr Glu Arg Lys His Asp Pro Lys Lys Leu Glu Glu Leu Gly
65   70   75   80

Asn Leu Ile Thr Ser Leu Asp Ala Gly Asp Ser Ile Val Val Ala Lys
                    85   90   95

Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu Glu Val Gln
                100   105   110

Ile Ala His Arg Arg Arg Asn Lys Leu Lys Lys Gly Asp Phe Arg Asp
            115   120   125

Glu Ser Asn Ala Thr Thr Glu Ser Asp Ile Glu Glu Thr Leu Lys Arg
    130   135   140

Leu Val Phe Asn Met Lys Lys Ser Pro Gln Glu Val Xaa Asp Ala Leu
145   150   155   160

Lys Asn Xaa Thr Val Asp Leu Val Leu Thr Ala His Pro Thr Gln Ser
            165   170   175

Val Arg Xaa Xaa Leu Leu Pro Xaa Ala Trp Xaa Gly Xaa Arg Xaa Xaa
            180   185   190

Tyr Xaa Thr Xaa

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195

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tctctcttct ctgcgtttca aaccctagtt gttttgttga ttgatctaaa tggcgttctt       180

tcgaagcgtt tctgcgcttt caaaactacg atctcgtgtg ggtcaacaac ctagtcttgc       240

taattcagtt agatggctcc aaactccaag ctccagtaac actgatcttt attctgagat       300

gaaggagcta gttccagagt atcaggaacg tgttaagaag ttgaagaaag accatggaag       360

tgttgaattg ggaaaaatca cagctgatat ggtacttggt ggaatgagag gaatgactgc       420

tttagtgtgg ctaggctcag ctgttgaccc agatgaggga attcgcttta ggggcatgac       480

aattcctgac tgccagaaaa cacttccagg tgcttttcct ggtggggagc ctttgcccga       540

ggctatactg tggcttctat tgaccggaaa ggtaccaagt aaagagcaag tagattcatt       600

agctcacgaa ttgcgaagtc gtgcaaaaat cccagagtat gcttacaagg caattgatgc       660

actgcctgtt tctgctcatc caatgacaca atttagtact ggtgtaatgg ccctccaggt       720
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ggagagtgag tttacaaagg catacgagag tgggatacat aagtcaaggt attgggagcc     780

aacttatgag gatagcttga atttaattgc tcgtttgcct ggaattgctg cctatattta     840

tcgacggata tacaaggatg gaaaaatcat accattggat gattctttgg attatggtgc     900

aaactatgct cacatgttag gatttgatga tccagaaacg ctggagttta tgaggctgta     960

tatttctatc catagtgatc atgaaggngg caacgttagt tctcacacag ctcacctagt    1020

tgctagttca ctatcagatc cttatcttgc attcgcagct gctctgaatg gtttagctgg    1080

cccactgcat ggtttagcca atcaggaagt tctaçgatgg atcagaaaca tagttaagga    1140

gtttggaact ccaaacataa gtacagaaca attgagcgac tacattcata aaacattgaa    1200

cagtggccag gttgtgcctg gatatggaca tggagttttg cgcaatacag acccaagata    1260

cacttgccag agggagtttg cattgaagca tttgcctaat gatccan     .      .     1307
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            20                  25                  30


Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val
            35                  40                  45


Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser
    50                  55                  60


Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg
65                  70                  75                  80


Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu
                85                  90                  95


Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu
            100                 105                 110


Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp
            115                 120                 125


Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu
    130                 135                 140


Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys
145                 150                 155                 160
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Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser
            165             170             175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr
            180             185             190

Glu Ser Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp
            195             200             205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr
    210             215             220

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu
225             230             235             240

Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu
            245             250             255

Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu
            260             265             270

Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu Ser
            275             280             285

Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly Pro
    290             295             300

Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn Ile
305             310             315             320

Val Lys Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser Asp
            325             330             335

Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr Gly
            340             345             350

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tctctcttct ctgcgtttca aaccctagtt gttttgttga ttgatcttaa tggcgttctt     180

tcgaagcgtt tctgcgcttt caaaactacg atctcgtgtg ggtcaacaac ctagtcttgc     240

taattcagtt agatggctcc aaactccaag ctccagtaac actgatcttt attctgagat     300

gaaggagcta gttccagagt atcaggaacg tgttaagaag ttgaagaaag accatggaag     360

tgttgaattg ggaaaaatca cagctgatat ggtacttggt ggaatgagag gaatgactgc     420

tttagtgtgg ctaggctcag ctgttgaccc agatgaggga attcgcttta ggggcatgac     480

aattcctgac tgccagaaaa cacttccagg tgcttttcct ggtggggagc ctttgcccga     540

ggctatactg tggcttctat tgaccggaaa ggtaccaagt aaagagcaag tagattcatt     600

agctcacgaa ttgcgaagtc gtgcaaaaat cccagagtat gcttacaagg caattgatgc     660

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attcccaatt cttttggatc cgaaatcatt cattctacgc ttcttctctc ttctctgcgt     120

ttcaaaccct agttgttttg ttgattgatc ttaatggcgt tctttcgaag cgtttctgcg     180

ctttcaaaac tacgatctcg tgtgggtcaa caacctagtc ttgctaattc agttagatgg     240

ctccaaactc caagctccag taacactgat ctttattctg agatgaagga gctagttcca     300

gagtatcagg aacgtgttaa gaagttgaag aaagaccatg gaagtgttga attgggaaaa     360

atcacagctg atatggtact tggtggaatg agaggaatga ctgctttagt gtggctaggc     420

tcagctgttg acccagatga gggaattcgc tttaggggca tgacaattcc tgactgccag     480

aaaacacttc caggtgcttt tcctggtggg gagcctttgc ccgaggctat actgtggctt     540

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caaaactacg atctcgtgtg ggtcaacaac ctagtctcgc taattcagtt agatggctcc     180

aaactccaag ctccagtaac actgatcttt attctgagat gaaggagcta gttccagagt     240

atcaggaacg tgttaagaag ttgaagaaag atcatggaag tgttgaattg ggaaaagtca     300

cagctgatat ggtacttggt ggaatgagag gaatgacagc tttagtgtgg ctaggctcag     360

ctgttgaccc agatgaggga attcgcttta ggggcatgac aattcctgac tgccagaaaa     420

cacttccagg tgcttttcct ggtggggagc ctttgcccga ggctatactg tggctgccat     480

tgaccggaaa ggtaccaagt aaagagcaag tagattcatt agctcacgaa ttgcgaagtc     540

gtgcaaaaat cccagagtat gcttacaagg caattgatgc actgcctgtt tctgctcatc     600

caatgacaca atttagtact ggtgtaatgg ccctccaggt ggagagtgag tttacaaagg     660

catatgagag tgggatacat n                                               681


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gtcttgctaa ttcagttaga tggctccaaa ctccaagctc cagtaacact gatctttatt     180

ctgagatgaa ggagctagtt ccagagtatc aggaacgtgt taagaagttg aagaaagacc     240

atggaagtgt tgaattggga aaaatcacag ctgatatggt acttggtgga atgagaggaa     300

tgactgcttt agtgtggcta ggctcagctg ttgacccana tgagggaatt cgctttaggg     360

gcatgacaat tcctgactgc cacaaaacac ttgcaggtgc ttttnctggc ggggagnctt     420

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ctgccagaaa acacttccag gtgctcttcc tggtggggag cctttgcccg aggctatact     180
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attgcgaagt cgtgcaaaaa tcccagagta tgcttacaag gcaattgatg cactgcctgt    300

ttctgctcat ccaatgacac aatttagtac tggtgtaatg ccctccagg tggagagtga     360

gtttacaaag gcatacgaga gtgggataca taagtcaagg tattgggagc caacttatga    420

ggatagcttg aatttaattg ctcgtttgcc tggaattgct gcctatattt atcgacggat    480

atacaaggat ggaaaaatca taccattgga tgattctttg gattatggtg caaactatgc    540

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agcctttgcc cgaggctata ctgtggcttc tattgaccgg aaaggtacca agtaaagagc    180

aagtagattc attagctcac gaattgcgaa gtcgtgcaaa aatcccagag tatgcttaca    240

aggcaattga tgcactgcct gtttctgctc atccaatgac acaatttagt actggtgtaa    300

tggccctcca ggtggagagt gagtttacaa aggcatacga gagtgggata cataagtcaa    360

ggtattggga gccaacttat gaggatagct tgaatttaat tgctcgtttg cctggaattg    420

ctgcctatat ttatcgacgg atatacaagg atggaaaaat cataccattg gatgattctt    480

tggattatgg tgcaaactat gctcacatgt taggatttga tgatccagaa acgctggagt    540

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ataccattgg atgattcttt ggattatggt gcaaactatg ctcacatgtt aggatttgat    180

gatccagaaa cgctggagtt tatgaggctg tatatttcta tccatagtga tcatgaaggt    240

ggcaacgtta gttctcacac agctcaccta gttgctagtt cactatcaga tccttatctt    300

gcattcgcag ctgctctgaa tggtttagct ggcccactgc atggtttagc caatcaggaa    360

gttctacgat ggatcagaaa catagttaag gagtttggaa ctccaaacat aagtacagaa    420

caattgagcg actacattca taaaacattg aacagtggcc aggttgtgcc tggatatgga    480

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ccttagatat agaggatacc ccattgagga gttggccgag aaaagcacct ttccggaagt     600

ggcatatctc atattgtatg gaaatttgcc ttctgcaaat cagttacaag aatgggaatt     660

tgctatatct cagcattcag ccttacctca aggagttttg gatctcatac aatcaatgcc     720

tcaagatgca catcctatgg cgtcctagt gaatgcaata agcgctctgt ctgtttttca     780

tcctgacgca aatcctgctc tcagaggtct tgacatctac aactcaaagc aagtgagaga     840

caaacaaata gcacggatta ttggaaagat aacaacaatt gctgctgcaa ttaatcttag     900

aatggcagga aggccacctg tgcttccatc caacaaacta tcttacacag agaacttcct     960

atacatgctt gattctctag caatcggtc atataaaccc aaccctcagc taactcgtgc    1020

actagacatc atcttcatcc tgcatgcaga acatgaaatg aattgctcta catctgctgt    1080

acgacacctt gcatcaagcg gcgtcgatgt atacactgct attgctggag gtgttggagc    1140

tctgtatgga cctcttcatg gtggagctaa tgaggcggtc cttaaaatgc tgagtgaaat    1200

tggaagtgtc gataacattc cagagttcat tgaaggtgtt aann                    1244
```

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<210>   337
<211>   358
<212>   PRT
<213>   Trifolium repens


<220>
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<222>   (358)..(358)
<223>   Xaa can be any naturally occurring amino acid

<400>   337
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Ala Arg Asn Arg Leu Ala Thr Leu Ser Ala His Leu Leu Pro Ser Ser
                20   25   30

Thr Thr Ser Ala Ala Leu Leu His Pro Ile His Leu Ser Ser Ser Ser
        35   40   45

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Gly Ile Ser Pro Pro Ser Asn Val Lys Gly Thr Leu Thr Val Val Asp
    50   55   60

Glu Arg Thr Gly Lys Lys Tyr Thr Ile Glu Val Ser Pro Asp Gly Thr
65   70   75   80

Val Lys Ala Asn Asp Phe Lys Lys Ile Ser Thr Gly Lys Asn Asp Lys
            85   90   95

Gly Leu Lys Leu Tyr Asp Pro Gly Tyr Leu Asn Thr Ala Pro Val Arg
            100   105   110

Ser Thr Ile Ser Tyr Ile Asp Gly Asp Glu Gly Ile Leu Arg Tyr Arg
        115   120   125

Gly Tyr Pro Ile Glu Glu Leu Ala Glu Lys Ser Thr Phe Pro Glu Val
    130   135   140

Ala Tyr Leu Ile Leu Tyr Gly Asn Leu Pro Ser Ala Asn Gln Leu Gln
145   150   155   160

Glu Trp Glu Phe Ala Ile Ser Gln His Ser Ala Leu Pro Gln Gly Val
            165   170   175

Leu Asp Leu Ile Gln Ser Met Pro Gln Asp Ala His Pro Met Gly Val
            180   185   190

Leu Val Asn Ala Ile Ser Ala Leu Ser Val Phe His Pro Asp Ala Asn
        195   200   205

Pro Ala Leu Arg Gly Leu Asp Ile Tyr Asn Ser Lys Gln Val Arg Asp
    210   215   220

Lys Gln Ile Ala Arg Ile Ile Gly Lys Ile Thr Thr Ile Ala Ala Ala
225   230   235   240

Ile Asn Leu Arg Met Ala Gly Arg Pro Pro Val Leu Pro Ser Asn Lys
            245   250   255

Leu Ser Tyr Thr Glu Asn Phe Leu Tyr Met Leu Asp Ser Leu Gly Asn
            260   265   270

Arg Ser Tyr Lys Pro Asn Pro Gln Leu Thr Arg Ala Leu Asp Ile Ile
        275   280   285

Phe Ile Leu His Ala Glu His Glu Met Asn Cys Ser Thr Ser Ala Val
    290   295   300

Arg His Leu Ala Ser Ser Gly Val Asp Val Tyr Thr Ala Ile Ala Gly
305   310   315   320

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```
Gly Val Gly Ala Leu Tyr Gly Pro Leu His Gly Gly Ala Asn Glu Ala
              325                 330                 335

Val Leu Lys Met Leu Ser Glu Ile Gly Ser Val Asp Asn Ile Pro Glu
              340                 345                 350

Phe Ile Glu Gly Val Xaa
              355
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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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attactaatt actagtacta attagtaata ccgatccctt tttctcgaac ccattcattc   120

aattcaaaga aggaaaaaca aaatcacaca aacaaacatc ttacaacaat gtcaacgaca   180

actactacaa ccgacgaatc caagctgcac gacgctgcac ggaaccgttt ggctaccctc   240

tcagctcact tgcttccttc ctccacaaac tccgctgcgc ttctccatcc tatccacctt   300

tcttcttcct ctgggatctc cccaccgtct aatgtcaaag gaacactcac cgttgttgat   360

gaacgtaccg ggaagaagta taccattgag gtctctcctg atggcaccgt taaagccaat   420

gatttcaaga agatatcaac tgggaagaat gataaggggc tcaaacttta tgatcctgga   480

tatttaaaca ctgctcctgt gcgatcaaca atttcttata ttgatggtga tgagggaatc   540

cttagatata gaggataccc cattgaagag ttggccgaga aaagcacctt ccggaagtg    600

gcatatctn                                                           609
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<210>  339
<211>  589
<212>  DNA
<213>  Trifolium repens


<220>
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<222>  (2)..(2)
<223>  n is a, c, g, or t
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<223>  n is a, c, g, or t

<220>
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<222>  (16)..(16)
<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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ctacaaccga cgaatccaag ctgcacgacg ctgcacggaa ccgtttggcc accctctcag     120

ctcacttgct tccttcctcc acaacctccg ccgcgctcct ccatcctatt cacctttccg     180

cttcctccgg gatctcccca ccgtctaatg tcaaaggaac actcaccgtt gttgatgaac     240

gtaccgggaa gaagtataac attgaggtct cacctgatgg caccgttaaa gccaatgatt     300

tcaagaagat atcaactggg aagaatgata agggactcaa actttatgat cctggatatt     360

taaacactgc tcctgtgcga tcaacaattt cttatattga tggtgatgag ggaatcctta     420

gatatagagg ataccccatt gaggagttgg ccgagaaaag cacctttccg gaagtggcat     480

atctcatatt gtatggaaat ttgccttctg caaatcagtt acaagaatgg gaatttgcta     540

tatctcagca ttcagcctta cctcaaggag ttttggatct catacaatn                589
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<213>  Trifolium repens


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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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ctactacaac cgacgaatcc aagctgcacg acgctgcacg gaaccgtttg gccaccctct     120
```

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```
cagctcactt gcttccttcc tccacaacct ccgccgcgct cctccatcct attcaccttt      180

ccgcttcctc cgggatctcc ccaccgtcta atgtcaaagg aacactcacc gttgttgatg      240

aacgtaccgg gaagaagtat aacattgagg tctcacctga tggcaccgtt aaagccaatg      300

atttcaagaa gatatcaact gggaagaatg ataagggact caaactttat gatcctggat      360

atttaaacac tgctcctgtg cgatcaacaa tttcttatat tgatggtgat gagggaatcc      420

ttagatatag aggatacccc attgaggagt tggccgagaa aagcaccttt ccggaagtgg      480

catatctcat attgtatgga aatttgcctt ctgcaaatca gttacaagaa tgggaatttg      540

ctatatctca gcattcagcc ttacctcaag gagtttttgga tctcatacaa tcnn          594
```

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<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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ttgcttcctt cctccacaac ctccgccgcg ctcctccatc ctattcacct ttcttcttcc      180

tccgggatct ccccaccgtc taatgtcaaa ggaacactca ccgttgttga tgaacgtacc      240

gggaagaagt ataccattga ggtctctcct gatggcaccg ttaaagccaa tgatttcaag      300

aagatatcga ctgggaagaa tgataaggga ctcaaacttt atgatcctgg atatttaaac      360

actgctcctg tgcgatcaac aatttcttat attgatggtg atgagggaat ccttagatat      420

agaggatacc ccattgagga gttggccgag aaaagcacct ttccggaagt ggcatatctc      480

atattgtatg gaaatttgcc ttctgcaaat cagttacaag aatgggaatt tgctatatct      540

cagcattcag ccttacctca aggagtttttn                                      570
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<210>  342
<211>  592
<212>  DNA
<213>  Trifolium repens


<220>
<221>  misc_feature
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cgaatccaag ctgcacgacg ctgcacggaa ccgtttggct accctctcag ctcacttgct   120

tccttcctcc acaaactccg ctgcgcttct ccatcctatc cacctttctt cttcctctgg   180

gatctcccca ccgtctaatg tcaaaggaac actcaccgtt gttgatgaac gtaccgggaa   240

gaagtatacc attgaggtct ctcctgatgg caccgttaaa gccaatgatt tcaagaagat   300

atcaactggg aagaatgata aggggctcaa actttatgat cctggatatt taaacactgc   360

tcctgtgcga tcaacaattt cttatattga tggtgatgag ggaatcctta gatatagagg   420

ataccccatt gaagagttgg ccgagaaaag cacctttccg gaagtggcat atctcatatt   480

gtatggaaat ttgccttctg caaatcagtt acaagaatgg gaatttgcta tatctcagca   540

ttcagcctta cctcaaggag ttttggatct catacaatca atgcctcaag nn   592

<210> 343
<211> 579
<212> DNA
<213> Trifolium repens

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aatgtatgga agtttaccta ctgaaagtaa gttagctgaa tggaatttcg ctatatctca   120

gcattcagct gttccagaag gagttttgga tatcatacaa tcaatgcctc atgatgcaca   180

tcctatgggt gtcctagtga atgcaataag cgctctttct gtttttcatc ctgacgccaa   240

tcctgctctt agaggtcttg atatttacga ctcaaaggaa gtgagagaca aacaaatagc   300

acggattatt ggaaagatta taacaattgc tgctgcagtt tatcttagaa tggcaggaag   360

gccacctgtg cttccatcca accaactatc ttacactgag aacttcctat acatgcttga   420

ttctttaggc aatcggtcat ataaacccaa ccctcagcta actcgtgcac tagacattat   480

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```
cttcatcctg catgcagaac atgaaatgaa ttgctctaca tctgctgtcc gacaccttgc     540

atcaagcggc gttgatgtat atactgctat tgctggggn                           579
```

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<210>  344
<211>  594
<212>  DNA
<213>  Trifolium repens
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```
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<223>  n is a, c, g, or t
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ctgtttttca tcctgatgca aatcctgctc tcagaggtct tgacatctac aactcaaagc    180

aagtgagaga caaacaaata gtgcggatta ttggaaagat aacaacaatt gctgctgcga    240

ttaatcttag attgggagga aggccacctg ttcttccatc caacaaactt tcttacacag    300

agaacttcct ttacatgctt gattctcttg gcaatcggtc atataaacct aatcctcgtc    360

taactcgtgc actggacatc atcttcatcc ttcatgcaga acatgaaatg aattgctcta    420

catctgctgt acgccacctt gcatcaagtg gtgtcgatgt atacactgct attgctggag    480

gtgttggagc tctgtatgga cctcttcatg gtggagctaa tgaggcggtc cttaaaatgc    540

tgagtgaaat tggaagtgtc gataacattc cagagttcat tgaaggtgtt aann           594
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<210>  345
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<212>  DNA
<213>  Trifolium repens
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accattcatt cccagaggtc gagatggcag catcagcagc agctacttt actattggaa     180

ctgcccaaac agggaggcca cttcctcaat caaacccttt tggtttgaaa gtcaattccc    240

aggttaattt taagaccttc tctggtctca aggccatgtc atctctaaga tgcgagtctg    300

aatcatcttt ctttggcaac gaaactagtg ctgctctgcg tgcaacttt gcacccaaag    360

ctcaaaagga aaaccaaaac atcaaccgca atttgcatcc tcaggcatcc tacaaagtgg    420

cggttcttgg tgctgcagga ggaattggtc agccactggc acttctcatt aagatgtcgc    480

ctttggtttc cgacctgcat ctttatgata tcgcgaatgt taagggagtt gctgctgata    540

tcagtcattg caacactcct tcaaaggttt tggatttcac aggtgcttct gagttggcaa    600

attgtttgaa aggtgtggat gtagttgtta tacctgctgg tgttcccaga aaacctggca    660

tgactcgtga tgaccttttc aacatcaatg ccggtatagt cagggacttg gtcaccgctg    720
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```
ttgcagataa ttgccctggt gcttttattc atgttatcag taacccggtg aactctacag     780

ttcctattgc tgctgaaatt ctgaaacaaa agggtgttta tgatcctaaa aagctctttg     840

gtgttactac acttgatgtt gtgagggcaa acacatttgt tgctcagaaa aagaacctga     900

ggctgattga tgtagatgtt cctgttgttg gtggtcatgc cgggattacc attcttcctc     960

ttctgtcaaa gacaagaccc tcagcaaatt tcactgatga agaaattgag gcgctaactg    1020

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gcattgaaaa gggtattgct tttgctcaaa agcaaactgt ttctgcttaa cttattttgt    1380

gaaagcatat attctatact ctctagcgtc catgcgagag aatgtcaatg ggtgatttct    1440

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tagcatcatt tactgcttcc agaacttatg atttaaattt tccatagtat catttctact    1560

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aaacgttgca ttttgaataa tactgccttt ggactagttt gtgtttcgaa aaaaaaaa     1738
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<210>  346
<211>  408
<212>  PRT
<213>  Trifolium repens

<400>  346
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1               5                   10                  15


Gly Arg Pro Leu Pro Gln Ser Asn Pro Phe Gly Leu Lys Val Asn Ser
            20                  25                  30


Gln Val Asn Phe Lys Thr Phe Ser Gly Leu Lys Ala Met Ser Ser Leu
        35                  40                  45


Arg Cys Glu Ser Glu Ser Ser Phe Phe Gly Asn Glu Thr Ser Ala Ala
    50                  55                  60


Leu Arg Ala Thr Phe Ala Pro Lys Ala Gln Lys Glu Asn Gln Asn Ile
65                  70                  75                  80


Asn Arg Asn Leu His Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly
                85                  90                  95


Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Ile Lys Met Ser
            100                 105                 110
```

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Pro Leu Val Ser Asp Leu His Leu Tyr Asp Ile Ala Asn Val Lys Gly
         115   120   125

Val Ala Ala Asp Ile Ser His Cys Asn Thr Pro Ser Lys Val Leu Asp
    130   135   140

Phe Thr Gly Ala Ser Glu Leu Ala Asn Cys Leu Lys Gly Val Asp Val
145   150   155   160

Val Val Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg Asp
          165   170   175

Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Arg Asp Leu Val Thr Ala
         180   185   190

Val Ala Asp Asn Cys Pro Gly Ala Phe Ile His Val Ile Ser Asn Pro
      195   200   205

Val Asn Ser Thr Val Pro Ile Ala Ala Glu Ile Leu Lys Gln Lys Gly
    210   215   220

Val Tyr Asp Pro Lys Lys Leu Phe Gly Val Thr Thr Leu Asp Val Val
225   230   235   240

Arg Ala Asn Thr Phe Val Ala Gln Lys Lys Asn Leu Arg Leu Ile Asp
         245   250   255

Val Asp Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro
         260   265   270

Leu Leu Ser Lys Thr Arg Pro Ser Ala Asn Phe Thr Asp Glu Glu Ile
      275   280   285

Glu Ala Leu Thr Val Arg Ile Gln Asn Ala Gly Thr Glu Val Val Glu
    290   295   300

Ala Lys Ala Gly Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala
305   310   315   320

Ala Arg Phe Val Glu Ser Ser Leu Arg Ala Leu Asp Gly Asp Ala Asp
          325   330   335

Val Tyr Glu Cys Ser Phe Val Gln Ser Asp Leu Thr Asp Leu Pro Phe
         340   345   350

Phe Ala Ser Arg Val Lys Ile Gly Arg Lys Gly Val Glu Ala Leu Ile
      355   360   365

Pro Thr Asp Leu Gln Gly Leu Ser Glu Tyr Glu Gln Lys Ala Leu Glu
    370   375   380

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```
Ala Leu Lys Pro Glu Leu Lys Ala Ser Ile Glu Lys Gly Ile Ala Phe
385                 390             395                 400

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                405
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acacgggtga gaaggagtga attgctccaa tggcaacaaa caaaatggaa aaaatggcat   180
caattgatgc acagcttaga caattagtac cagcaaaagt tagtgaagat gataaactta   240
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atgatcctaa gaaacttgaa gagctcggaa atttgataac aagtttagat gcaggagatt   420
caattgttgt tgctaagtcc ttttcgcaca tgcttaactt ggccaactta gctgaagagg   480
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caccacaaga tgagatgaga gcagggatga gttacttcca cgaaacaatt tggaagggtg   900
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ttccctataa tgctcctctt attcagtttt cttcatggat ggggggtgat cgtgatggta  1020
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caaatttgta ttattcccag attgaagatc ttatgtttga actgtctatg tggcgttgca  1140
atgatgagct gcgtgatcgc gcagaagaac ttcacaggaa ttccaagaaa gatgaagttg  1200
caaaacacta catagagttt tggaaaaaaa ttcctttgaa tgaaccgtac cgtgttatac  1260
ttggtgatgt aagggacaag ctctatcgta ctcgtgagcg gtctcgctat ctcttagctc  1320
atggctattc tgaaattcct gaggaagcca cattcaccaa tgttgatgag ttcttggaac  1380
ctcttgaact atgctacaga tcactctgtg cttgtggtga tcgtgcggtt gccgatggaa  1440
gccttcttga tttcttgagg caagtttcca cttttggact gtcactggta agacttgata  1500
taaggcagga gtcagatcgt cacacggacg tgatggatgc cattaccaaa catttggaaa  1560
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Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp Leu
        35   40   45

His Gly Glu Asp Leu Lys Asp Ser Val Gln Glu Val Tyr Glu Leu Ser
    50   55   60

Ala Glu Tyr Glu Arg Lys His Asp Pro Lys Lys Leu Glu Glu Leu Gly
65   70   75   80

Asn Leu Ile Thr Ser Leu Asp Ala Gly Asp Ser Ile Val Val Ala Lys
                85   90   95

Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu Glu Val Gln
            100   105   110

Ile Ala His Arg Arg Arg Asn Lys Leu Lys Lys Gly Asp Phe Arg Asp
        115   120   125

Glu Ser Asn Ala Thr Thr Glu Ser Asp Ile Glu Glu Thr Leu Lys Arg
    130   135   140

Leu Val Phe Asn Met Lys Lys Ser Pro Gln Glu Val Phe Asp Ala Leu
145   150   155   160

Lys Asn Gln Thr Val Asp Leu Val Leu Thr Ala His Pro Thr Gln Ser
                165   170   175

Val Arg Arg Ser Leu Leu Gln Lys His Gly Arg Val Arg Asn Cys Leu
            180   185   190

Ser Gln Leu Tyr Ala Lys Asp Ile Thr Pro Asp Asp Lys Gln Glu Leu
        195   200   205

Asp Glu Ala Leu Gln Arg Glu Ile Gln Ala Ala Phe Arg Thr Asp Glu
    210   215   220

Ile Lys Arg Thr Pro Pro Thr Pro Gln Asp Glu Met Arg Ala Gly Met
225   230   235   240

Ser Tyr Phe His Glu Thr Ile Trp Lys Gly Val Pro Lys Phe Leu Arg
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Arg Val Asp Thr Ala Leu Lys Asn Ile Gly Ile Asn Glu Arg Val Pro
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Tyr Asn Ala Pro Leu Ile Gln Phe Ser Ser Trp Met Gly Gly Asp Arg
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Asp Gly Asn Pro Arg Val Thr Pro Glu Val Thr Arg Asp Val Cys Leu
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His Tyr Ile Glu Phe Trp Lys Lys Ile Pro Leu Asn Glu Pro Tyr Arg
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Val Ile Leu Gly Asp Val Arg Asp Lys Leu Tyr Arg Thr Arg Glu Arg
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Ser Arg Tyr Leu Leu Ala His Gly Tyr Ser Glu Ile Pro Glu Glu Ala
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Thr Phe Thr Asn Val Asp Glu Phe Leu Glu Pro Leu Glu Leu Cys Tyr
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Arg Ser Leu Cys Ala Cys Gly Asp Arg Ala Val Ala Asp Gly Ser Leu
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Leu Asp Phe Leu Arg Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg
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Leu Asp Ile Arg Gln Glu Ser Asp Arg His Thr Asp Val Met Asp Ala
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Ile Thr Lys His Leu Glu Ile Gly Ser Tyr Gln Asp Trp Ser Glu Glu
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Lys Arg Gln Glu Trp Leu Leu Ser Glu Leu Val Gly Lys Arg Pro Leu
            485             490             495

Phe Gly Pro Asp Leu Pro Gln Thr Asp Glu Ile Arg Glu Val Leu Glu
            500             505             510

Thr Phe His Val Ile Ala Glu Leu Pro Ser Asp Asn Phe Gly Ala Tyr
        515             520             525

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Leu Phe Ser Ile Asp Trp Tyr Ile Asn Arg Ile Asp Gly Lys Gln Glu
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Val Met Ile Gly Tyr Ser Asp Ser Gly Lys Asp Ala Gly Arg Phe Ser
        595             600             605

Ala Ala Trp Gln Leu Tyr Lys Ala Gln Glu Asp Leu Ile Asn Val Ala
    610             615             620

Gln Lys Tyr Gly Val Lys Leu Thr Met Phe His Gly Arg Gly Gly Thr
625             630             635             640

Val Gly Arg Gly Gly Gly Pro Thr His Leu Ala Ile Leu Ser Gln Pro
            645             650             655

Pro Asp Thr Ile His Gly Ser Leu Arg Val Thr Val Gln Gly Glu Val
        660             665             670

Ile Glu Gln Ser Phe Gly Glu Glu His Leu Cys Phe Arg Thr Leu Gln
    675             680             685

Arg Phe Thr Ala Ala Thr Leu Glu His Gly Met Arg Pro Pro Ser Ser
    690             695             700

Pro Lys Pro Glu Trp Arg Glu Leu Met Asp Gln Met Ala Val Ile Ala
705             710             715             720

Thr Glu Glu Tyr Arg Ser Ile Val Phe Lys Glu Pro Arg Phe Val Glu
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Tyr Phe Arg Leu Ala Thr Pro Glu Met Glu Tyr Gly Arg Met Asn Ile
            740             745             750

Gly Ser Arg Pro Ala Lys Arg Arg Pro Cys Gly Gly Ile Glu Thr Leu
        755             760             765

Arg Ala Ile Pro Trp Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu
    770             775             780

Pro Val Trp Leu Gly Phe Gly Ala Ala Phe Lys Gln Val Ile Ala Lys
785             790             795             800

Asp Val Lys Asn Leu His Met Leu Gln Glu Met Tyr Asn Gln Trp Pro
            805             810             815
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Phe Phe Arg Val Thr Ile Asp Leu Val Glu Met Val Phe Ala Lys Gly
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Asp Pro Gly Ile Ala Ala Leu Asn Asp Arg Leu Leu Val Ser Gln Asp
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Leu Trp Pro Phe Gly Glu Gln Leu Arg Ser Lys Tyr Glu Glu Thr Lys
    850   855   860

Lys Leu Leu Leu Gln Val Ala Thr His Lys Glu Val Leu Glu Gly Asp
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Pro Tyr Leu Lys Gln Arg Leu Arg Leu Arg Asp Ser Tyr Ile Thr Thr
              885   890   895

Leu Asn Val Phe Gln Ala Tyr Thr Leu Lys Arg Ile Arg Asp Pro Asn
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Tyr Lys Val Glu Val Arg Pro Arg Val Ser Lys Glu Ser Ala Glu Thr
      915   920   925

Ser Lys Ser Ala Asp Glu Leu Val Thr Leu Asn Pro Thr Ser Glu Tyr
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<213>  Trifolium repens

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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val
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Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser
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Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg
65   70   75   80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu
              85   90   95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu
              100   105   110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp
          115   120   125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu
    130   135   140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys
145   150   155   160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser
              165   170   175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr
          180   185   190

Glu Gly Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp
          195   200   205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr
    210   215   220

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu
225   230   235   240

Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu
              245   250   255

Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu
          260   265   270

Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu
          275   280   285

Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly
    290   295   300

Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn
305   310   315   320

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Ile Val Lys Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser
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Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr
              340               345               350

Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg
              355               360               365

Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val
    370               375               380

Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys
385               390               395               400

Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu
              405               410               415

Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly
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Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala
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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val
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Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser
    50   55   60

Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg
65   70   75   80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu
                85   90   95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu
            100   105   110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp
        115   120   125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu
    130   135   140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys
145   150   155   160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser
            165   170   175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr
            180   185   190

Glu Gly Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp
        195   200   205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr
    210   215   220

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu
225   230   235   240

Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu
            245   250   255

Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu
            260   265   270

Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu
        275   280   285

Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly
    290   295   300

Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn
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Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr
          340             345             350

Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg
          355             360             365

Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val
    370             375             380

Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys
385             390             395             400

Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu
              405             410             415

Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly
              420             425             430

Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala
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tcttttttggc gtcgcgagga gtattggagt tggccctcag ctgatatggg accgtgctct    1440
tggaatgcca cttgaaaggc caaaaagtgt cacactggag aaacttgaga aactcgtcgg    1500
tgcatcatcc taaaattgaa agcacagtta cctctggatt actaaaatac acactgcggt    1560
tgtaggttgt tggtaactcg aaacatttgg tgcaattgca atgagaaata ttcgttgccc    1620
acatcccctt cccttatttt tctggttgtt ttgtcagcat tttttgattg agaagatttt    1680
ggtatttagg aaagggtggg attatcaccc tcacagttgt ctttccattt ttctacacag    1740
cataaattag gtcccaaggg agcatcagaa taaaggcatt atgttttggg ggtaatcccc    1800
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ccactgctta atcactagtg aattc                                          1885
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Met Ala Phe Phe Arg Ser Val Ser Ala Leu Ser Lys Leu Arg Ser Arg
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Val Gly Gln Gln Pro Ser Leu Ala Asn Ser Val Arg Trp Leu Gln Thr
            20                  25                  30


Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val
        35                  40                  45


Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser
    50                  55                  60
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Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg
65   70   75   80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu
                  85   90   95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu
              100   105   110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp
          115   120   125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu
      130   135   140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys
145   150   155   160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser
              165   170   175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr
              180   185   190

Glu Ser Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp
          195   200   205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr
210   215   220

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu
225   230   235   240

Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu
              245   250   255

Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu
              260   265   270

Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu
          275   280   285

Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly
290   295   300

Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn
305   310   315   320

Ile Val Thr Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser
              325   330   335

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Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr
            340   345   350

Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg
        355   360   365

Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val
    370   375   380

Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys
385   390   395   400

Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu
                405   410   415

Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly
            420   425   430

Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala
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Leu Gly Met Pro Leu Glu Arg Pro Lys Ser Val Thr Leu Glu Lys Leu
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Glu Lys Leu Val Gly Ala Ser Ser
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<210> 357
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